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LETTER

OF THE

SECRETARY OF THE TREASURY

TO

THE CHAIRMAN OF THE COMMITTEE ON FINANCE,

COMMUNICATING

A report of John Jay Knox in relation to a revision of the laws pertaining to the mint and coinage of the United States.

APRIL 28, 1870.—Referred to the Committee on Finance and ordered to be printed.

MAY 2, 1870.—Ordered that five hundred additional copies be printed for the use of the Treasury Department.

TREASURY DEPARTMENT, April 25, 1870.

SIR: I have the honor to transmit herewith "A bill revising the laws relative to the mint, assay offices, and coinage of the United States," and accompanying report. The bill has been prepared under the supervision of John Jay Knox, Deputy Comptroller of the Currency, and its passage is recommended in the form presented. It includes, in a condensed form, all the important legislation upon the coinage, not now obsolete, since the first mint was established, in 1792; and the report gives a concise statement of the various amendments proposed to existing laws, and the necessity for the change recommended. There has been no revision of the laws pertaining to the mint and coinage since 1837, and it is believed that the passage of the inclosed bill will conduce greatly to the efficiency and economy of this important branch of the government service.

I am, very respectfully, your obedient servant,

GEO. S. BOUTWELL,

Secretary of the Treasury.

Hon. JOHN SHERMAN,

Chairman Finance Committee, Senate of the United States.

TREASURY DEPARTMENT,
OFFICE OF COMPTROLLER OF THE CURRENCY,
Washington, April 25, 1870.

SIR: The last annual report of the Secretary of the Treasury contained the following paragraph:

The mining and coining of the precious metals is now so large a national interest that it deserves more attention than it has hitherto received. At present there is no bureau or officer in the Treasury Department at Washington charged especially with the management of this great interest. I therefore recommend that provision be made for the appointment of a proper officer to be intrusted with this branch of the public business, under the direction of the Secretary of the Treasury.

The coinage of the country is diminished in amount by the fact that in England and France the mint expenses are much less than with us. It would no doubt have a tendency to prevent the export of the precious metals in the form of bullion, if the mint charges were to be reduced or altogether abolished.

In accordance with your request, made some weeks since, to prepare a bill which should include these recommendations, and also present in a concise form every important provision contained in the different laws relative to the mint and coinage, I have the honor to hand you herewith "A bill revising the laws relative to the mint, assay offices, and coinage of the United States."

The method adopted in the preparation of the bill was first to arrange in as concise a form as possible the laws now in existence upon these subjects, with such additional sections and suggestions as seemed valuable. Having accomplished this, the bill, as thus prepared, was printed upon paper with wide margin, and in this form transmitted to the different mints and assay offices, to the First Comptroller, the Treasurer, the Solicitor, the First Auditor, and to such other gentlemen as are known to be intelligent upon metallurgical and numismatical subjects, with the request that the printed bill should be returned with such notes and suggestions as experience and education should dictate. In this way the views of more than thirty gentlemen who are conversant with the manipulation of metals, the manufacture of coinage, the execution of the present laws relative thereto, the method of keeping accounts, and of making returns to the department, have been obtained with but little expense to the department, and little inconvenience to correspondents. Having received these suggestions, the present bill has been framed, and is believed to comprise within the compass of eight or ten pages of the revised statutes every important provision contained in more than sixty different enactments upon the mint, assay offices, and coinage of the United States, which are the result of nearly eighty years of legislation upon these subjects.

PROPOSED AMENDMENTS.

The new features of the bill now submitted are chiefly: the establishment of a Mint Bureau at the Treasury Department, which shall also have charge of the collection of statistics relative to the precious metals; the consolidation of the office of superintendent with that of the treasurer, thus abolishing the latter office, and disconnecting the mint entirely from the office of assistant treasurer; the repeal of the coinage charge, and authorizing the exchange of unparted for refined bars; a reduction in the amount of wastage, and the tolerance (deviation in weight and fineness) in the manufacture of coin; requiring the token coinage to be of one material of uniform value, and to be redeemed under proper regulations when issued in excess, and the expense of its manufacture to be paid from specific appropriations, and not from the gain arising in its manufacture, as heretofore; an entire change in the manner of issuing the silver (subsidiary) coinage; discontinuing the coinage of the silver dollar; limiting the amount of silver to be used as alloy, so as to make the gold coinage of uniform color; the destruction of the dies not in use annually; requiring vouchers to pass between the different officers of the mint in all transfers of bullion or coin; requiring increased bonds from officers of the mint, and authorizing each officer to nominate his subordinate before appointment; and also making it an offense to increase or diminish the weights used in the mint.

LOCATION OF MINT AT PHILADELPHIA—BRANCH MINTS.

The mint was located at Philadelphia by act of April 2, 1792, for the reason that at that time that city was the seat of government and the

commercial center of the country. The act of January 18, 1837, gave to the Director of the Mint the supervision of the mint and branches. Two years previous, March 3, 1835, an act had been passed establishing branch mints at New Orleans, at Charlotte, North Carolina, and Dahlonega, Georgia. There was no expectation that any large amount of bullion would be deposited at these institutions, and they were established rather to gratify the desire for the establishment of mints in the South than from any motive of sound national policy, and their supervision was placed under the control of the Mint at Philadelphia. Eleven years later, January 19, 1848, gold was discovered in California, and twenty-two years later, June, 1859, silver (the Comstock lode) in Nevada. In July, 1852, the branch mint in San Francisco, and in March of the next year the assay office in New York, were authorized, and following out former precedents, these institutions were placed under the control and regulation of the Director of the Mint.

MINT BUREAU REQUIRED.

This supervision has been merely nominal. In the year 1856, large losses—nearly a quarter of a million of dollars (\$235,073 12)—occurred in the office of the melter and refiner in San Francisco, and a committee, and subsequently a special agent, was sent by the Secretary of the Treasury to examine that institution, who reported great irregularities in its management, and the amount of the deficiency, no portion of which was ever recovered. An examination was also made by direction of the Secretary in the year 1866, which exhibited large differences in the accounts of the coiner and the treasurer, which could have easily been traced to the responsible party if the different officers of the mint had been required in their transfers of bullion to take and receive the ordinary receipts required in business transactions. During the present year, the examinations which have been made by your direction into the affairs of the branch mints at San Francisco and Denver, and of the assay office of New York, have disclosed other irregularities, resulting in large losses to the government, which might easily have been prevented by periodical examinations conducted by competent persons. The examination into the affairs of the assay office in New York in particular exhibited the fact that vouchers had been paid for many years by different treasurers of that office without requiring the approval of the different officers for whom the supplies had been ordered, and that these vouchers had been transmitted to the department and passed upon by the accounting officers of the Treasury, it not being considered a part of their duty to examine vouchers transmitted to them from the mints and assay offices to ascertain if the regulations of the Mint at Philadelphia had been followed. No official examination of the assay office in New York by the Director of the Mint, as far as can be ascertained, has ever taken place, and it was with difficulty that a copy of the regulations of the Mint for the transaction of business could be found.

A large portion of the business of the Mint at Philadelphia is the manufacture of the minor coinage. The total amount of copper, bronze and copper-nickel coinage which has been issued at the Mint is \$10,407,603 55; prior to the year 1858 the total issue was \$1,662,813 55; the balance, \$8,744,790, has all been issued during the last twelve years.

The expense of the manufacture of this coinage has been paid from the gain arising from the conversion of copper, bronze, and copper-nickel into coin having a nominal value much exceeding its intrinsic

value. The amount paid into the treasury during the past twelve years from this source has been \$4,225,000, so that the minor coinage has been manufactured at a cost of more than one-half of its nominal value. If the manufacture of this coinage had been under the supervision of an officer not influenced by the clamor for patronage, and independent of all local pressure, its cost would not probably have been more than one-third of its nominal value.

The national banks of the country are subject to examinations annually, or oftener, by experts, and a corps of special agents are continually in the service looking after the interests of the government in connection with the custom-houses and the depositories of public money. The mints and assay offices of the United States should at all times be subject to like inspection. The Mint at Philadelphia is one of the institutions requiring this supervision. Its coinage is only about one-sixth of its sister institution in San Francisco, and its deposits about one-third of the assay office in New York, so that if the officers of each establishment are equally well qualified, the Mint in Philadelphia has no right to claim the supervision of establishments more favorably located for receiving deposits of bullion. Moreover, an officer located at the seat of government, by the opportunity afforded him of interviews with different persons from all parts of the country, would be more likely to learn the wants and views of each section in its relation to the business of this office. Having the supervision of the statistics pertaining to the development of the mining industry of the precious metals, as provided for in the bill, and the opportunity of obtaining valuable information from other departments of the government, he would be able at all times to furnish the most accurate data relative to the annual production and the amount of the precious metals existing in the country, and annually exhibit, in concise and well-arranged tables, statistics relative to the coinage of the country and of the world. He would require frequent reports in reference to all business transactions at the different establishments, and would carefully scrutinize all vouchers made to the department before they are passed to the accounting officers for final settlement. Having made personal visitations to the different institutions, he would be able to criticise the estimates of each establishment, (the annual estimates for the mint service during the year 1870, as presented by the Director without amendment, were \$826,526,) and to reduce these estimates within proper limits before they are transmitted to Congress. He would hold the same relation to the institutions under his charge that the Treasurer of the United States holds toward the different assistant treasurers; and the officers of customs and other heads of departments toward their subordinates. Finally, by devoting his time to the consideration of these subjects, he would be able to present intelligent views upon "the mining and coinage of the precious metals, which is now so large a national interest as to demand more attention than it has heretofore received."

DISCONTINUANCE OF THE OFFICE OF TREASURER.

The office of the treasurer of the mint in the proposed bill has been abolished, and his duties transferred to the superintendent. The only objection to this change is that the office of the superintendent should be kept distinct, so that he may be a check upon the treasurer. This is unnecessary. In the proposed bill the assayer, who determines the value of bullion, is required to countersign the certificate issued to the depositor, who is himself present and watchful for his own interest. A sufficient check upon the purchase of supplies will be to require, as at

present, the approval of the officer for whose use such supplies are ordered, upon all vouchers before payment. The business of the different assistant treasurers has of late years been very much increased. The office of treasurer of the mint is in every instance in a building disconnected from that of the assistant treasurer, and the business is usually performed by subordinates. It is, moreover, impossible to examine in a satisfactory manner the office of an assistant treasurer who holds at the same time the office of treasurer of the mint, without first closing the mint, precipitating the bullion in solution, and ordering a general settlement of the institution, a proceeding which requires many days, and which is not usually performed oftener than once a year.

OFFICERS TO NOMINATE THEIR SUBORDINATES.

The bill also increases the bonds of the operative officers of the mint, and authorizes them to nominate their subordinates, subject to the approval of the superintendent, before they are submitted for appointment. This provision will prevent an excess of workmen, make each officer responsible for the men employed, and prevent the forcing of incompetent and undesirable subordinates upon the different officers. Authority is also given for obtaining the services of skilled artisans in the preparation of dies for coinage.

AUTHORITY TO EXCHANGE UNPARTED BARS FOR REFINED BULLION.

It is not proposed in the present bill to increase or diminish the charges for refining bullion, but to encourage the refining of gold and silver bullion by private parties, and to authorize under proper regulations the exchange of unparted bars for refined bullion, thus reducing the expense and unavoidable wastage consequent upon that process. It is well understood upon the Pacific coast that private parties can refine bullion at a much less rate than the mint. This is owing, in the first place, to the fact that private parties can use the sulphuric-acid process, which is much cheaper than the nitric-acid process of the mint; and secondly, that the deposits at the mint in San Francisco are chiefly in gold, when it is absolutely necessary that there should be two parts of silver mixed with one part of gold in solution, in order successfully to part the one from the other. The mint must therefore purchase silver to be used for this purpose, and use at a loss a much larger amount of acid than is necessary for the manipulation of the bullion deposited. Private refiners have too much silver; the mint too little; an exchange can therefore take place beneficial to both parties without the slightest risk to the government, and with a contingent benefit to the miner and the depositor.

REPEAL OF THE COINAGE CHARGE.

An act has recently passed the English Parliament* authorizing, as

* "Where any person brings to the mint any gold bullion, such bullion shall be assayed and coined, and delivered out to such person, *without any charge for such assay or coinage, or for waste in coinage*; provided that, 1. If the fineness of the whole of the bullion so brought to the mint is such that it cannot be brought to the standard fineness under this act of the coin to be coined thereout, without refining some portion of it, the master of the mint may refuse to receive, assay, or coin such bullion. 2. Where the bullion so brought to the mint is finer than the standard fineness under this act of the coin to be coined thereout, there shall be delivered to the person bringing the same such additional amount of coin as is proportionate to such superior fineness. No undue preference shall be shown to any person under this section, and every person shall have priority according to the time at which he brought such bullion to the mint for assay or coinage."—Section 8, *English "coinage act, 1870."*

hitherto, payment in coin to depositors of refined bullion without charge. The coinage charge at the French mint is about one-fifth of one per cent.; our present charge is one-half of one per cent. Our coinage charge it is now proposed to abolish, in order to conform to the practice of our own mint prior to the act of February 21, 1853, and for the reason that it should be the policy of the government to hinder rather than to encourage the export of bullion. Our present laws have the effect to induce bankers to ship bullion as a commodity for the purpose of making sterling exchange. A very intelligent gentleman upon the Pacific coast, who is thoroughly familiar with this question, in a recent publication thus refers to the subject:

I do not desire to be understood as arguing that any change of our mint laws will put a stop to the export of the precious metals, when it becomes necessary for the adjustment of the balance of trade. That is one of those inexorable commercial necessities so well understood, that it would be folly to pretend to the discovery of any expedient that would obviate it. My proposition simply is, that when the balance of trade is not against us the precious metals are exported as commodities for the profit on their out-turn above the par of exchange, or may be so exported in excess of what the balance of trade requires. In other words, when the market is abundantly supplied with commercial bills with which bankers could cover their own exchange, they still prefer to ship bullion, not only as being a safer remittance, but as also furnishing a profit on the out-turn, equal to, or perhaps exceeding, the discount on commercial bills. Furthermore, that while the balance may be against us in the aggregate, yet, with reference to particular periods of time, and to particular countries, it may be in our favor, and that a nation may become an importer of the precious metals as commodities without reference to the balance of trade. Such, indeed, is our daily experience here. While we are exporting our unrefined gold and silver to Europe, and our refined metals to China, we are importing gold from British Columbia, and silver from Mexico. While in the last ten years we have exported \$612,000,000 of our native product, we have imported \$157,000,000 of foreign treasure, and yet we receive no practical benefit from it as a means of increasing our metallic circulation; for it no sooner reaches our market than it commands a premium above its value in our mint for re-export, when it is in the form of bullion; and when in [foreign] coins it only entails a loss upon American commerce, as they are received abroad at a greater valuation than they will realize either in our market or at our mints; and we are, therefore, in every event, and under every condition of trade, the loser. That as the commercial value of gold as a commodity is greater than its value in our mints, our own production seeks other markets uncoined, and that of other nations avoids ours. While, however, there is a profit in the export of uncoined bullion, taken at its valuation in our mints, there is always a loss on the export of our coins taken at their current value. The result, therefore, of modifying our mint charges so as to conform to those of other nations would be to raise the coining value of gold at home above its commercial value, and thereby make it more valuable for coinage than for export. It would, therefore, all seek our mints for coinage; and when once coined would be the very last thing any one would want to ship, and never would be exported, except in cases of absolute necessity, and when no other medium of exchange could be procured.

Hon. H. R. Linderman, late Director of the Mint, in his recent report to the department upon the branch mint at San Francisco, confirms this statement:

My attention was attracted to the very small amount of refining and coinage executed at the branch mint at San Francisco, compared with the production of the country, and I was naturally led to inquire for an explanation. A due examination of the subject soon satisfied me as to the cause, which I found to be that, under our present system of mint laws, bullion has a higher commercial value for export than for coinage in the mint, which not only affects the local interests of that coast, but in view of the diminishing product of the precious metals, becomes a question of national importance. The reason for this is, that as gold and silver are chiefly valuable for the purpose of manufacturing money, the cost incidental to coinage necessarily determines the value of the bullion. I find, on comparison, and especially at San Francisco, that the expenses of coinage are much greater than abroad, and hence our metallic product commands a higher price in foreign countries than can be realized by its coinage at home. The principal charge tending to produce this result is that of half of one per cent. for coinage, which is above that of any other nation, and especially France and England, where most of our gold bullion is exported.

The importance of this subject had presented itself in a measure to me while I was Director of the Mint, and in my annual report for 1868 I recommended its reduction

from a half to a quarter of one per cent.; but my examination at San Francisco has led me to consider the subject more thoroughly, and I am convinced that it should be abrogated altogether, and that we should return to our uniform practice prior to 1853, which was to coin gold without charge, not only as an expedient for encouraging coinage, but as being more consistent with the theory of money as a universal standard of value. A few examples will demonstrate the fact that bullion is, as I have before stated, of greater commercial value in our markets for export than for coinage at the mint. An unparted stamped bar (ounces, 42.24 gross, 892 thousandths fine of gold, 98 fine of silver, and 10 parts base metal) deposited at branch mint, San Francisco:

Value of gold.....	\$778 87
Value of silver.....	4 85
Premium on silver, 4 per cent.....	19
Branch mint, gross value.....	783 91

Deductions.

Refining charge, 11 cents per ounce, gross.....	\$4 65
Coinage charge, one-half of one per cent.....	3 91
	8 56
Net branch mint return.....	775 35
Same bar sold in market as bullion stamped, ounces, 42.240; 892 fine, (sold at par 892).....	\$778 87
Less one-eighth of one per cent., assay charge.....	97
	777 90
Difference in favor of sale in market.....	2 55
The same bar, if minted at New York or Philadelphia, gross value of bar.....	\$783 91

Deductions.

Refining, 5 cents per ounce, gross.....	\$2 11
Coinage charge same as at San Francisco.....	3 91
	6 02
Net United States mint or United States assay office return.....	777 89
The same bar sold at New York at $\frac{1}{8}$ on 900 would net.....	780 81
Difference against deposit for coinage and in favor of sale as bullion for export.....	2 92
The same bar deposited at San Francisco assaying works, gross value.....	\$783 91

Deductions.

Refining, 8 cents per ounce, gross.....	\$3 38
Coinage charge.....	3 91
	7 29
Sold as bullion for export.....	776 62
	777 90
Difference against deposit for coinage.....	1 28

The net proceeds of the same bar, if coined without deduction of the half of one per cent. for coinage, would be as follows:

	Coinage value.	Market value as bullion.	Diff. in favor of coinage.
San Francisco branch mint.....	\$779 26	\$777 90	\$1 36
Philadelphia mint and New York assay office.....	781 80	780 81	99
San Francisco refining works.....	780 53	777 90	2 63

BASE METAL COINAGE.

The proposed bill authorizes the issue, as at present, of three and five cent copper-nickel coins, and in addition a one-cent piece of the same material. These coins are made redeemable in lawful money in sums of fifty dollars, and are legal tender in sums of twenty cents in any one payment. The proposed cent coin will be one and one-half grams in weight, a little heavier and a little larger than the present five-cent silver piece, which, together with the three-cent silver piece, is discontinued. The copper and bronze coins heretofore authorized are exchangeable for the copper-nickel coins. They will therefore gradually pass out of circulation, leaving eventually a minor coinage of one material, and of uniform value. A suggestion was made to authorize the issue of but a single coin in addition to the gold and silver coinage now in existence, that piece to be one cent, into which all other base-metal coins shall be exchangeable; but the present copper-nickel coins are convenient and popular, and it was not thought best to withdraw them, but to provide for their redemption and the discontinuance of the issue when redundant.

ALLOWANCE FOR WASTAGE.

The present law authorized an allowance to the melter and refiner of two ounces of wastage on every thousand ounces of bullion manipulated; to the coiner one and one-half ounces on every thousand ounces of gold, and two ounces on every thousand ounces of silver manipulated. In the proposed bill this allowance is reduced nearly one-half, the melter and refiner being allowed one-thousandth on gold, and one and one-half thousandths on silver, and the coiner one-half of one-thousandth on gold, and one and one-half thousandths on silver. Experience in the mints and assay offices for some years past has shown that the present allowance is excessive, and that not one-fifth of that amount is required. The propriety of a reduction is therefore evident.

TOLERANCE IN FINENESS, EXISTING AND PROPOSED.

The law prescribes that the gold and silver coins shall be nine-tenths fine, that is to say, nine parts pure gold, or silver, and one part alloy. It is not practicable in the operations of the mints to conform exactly to the standard fineness, consequently a limit of variation, termed the "tolerance" or "remedy," is allowed under existing laws. This tolerance is two one-thousandths on gold, and three one-thousandths on silver ingots prepared by the melter and refiner. In delivering ingots to the treasurer he is credited with the standard weight, even though they are two thousandths below it in fineness. The actual practice of the mint is not to approve ingots varying more than a half of one-thousandth, or one-fourth of the legal deviation allowed from the standard. It has been thought best, after careful consideration, to reduce the tolerance of fineness to one-thousandth on gold, and two and one-half thousandths on silver.

TOLERANCE OF WEIGHT UNDER EXISTING LAWS.

It is also found impracticable to prepare coins of the precise weight prescribed by law, and a deviation therefrom is allowed. Under existing laws, the deviation in the double eagle, eagle, and half eagle is one-half grain, troy,* or about two cents; in the quarter eagle, three-dollar

* A grain of gold of the standard fineness, is worth nearly four (3.876) cents; a pennyweight, ninety-three (93.024) cents; and a grain of standard silver one-fourth (0.25001) of a cent.

and one-dollar gold pieces, one-quarter of a grain or one cent. In the silver coins it is greater than in gold coins, as the former are not usually adjusted by hand, the deviation being one and one-half grains (three-eighths of one cent) on the half dollar, one grain on the quarter dollar, (one-quarter of one cent,) and one-half grain (one-eighth of one cent) upon the dime. To prevent an issue of light coins below the prescribed weight, but within the limits of tolerance, the law prescribes that when a number of pieces are weighed together for delivery by the coiner to the treasurer, and by the latter to the depositor, the deviation shall not exceed three pennyweights (value \$2 79) in one thousand double eagles, two pennyweights (value \$1 86) in one thousand eagles; and one and one-half pennyweights (value \$1 39.5) in one thousand half eagles, and one pennyweight (value ninety-three cents) in one thousand dollar pieces.

TOLERANCE OF WEIGHT IN PROPOSED BILL; IN SINGLE PIECES AND
IN BULK.

It has been deemed expedient to contract the allowance in weighing a number of pieces, as a more effectual check, and to protect the government and the public against the possibility of uniformly issuing coins of a light weight. The coiner is credited with the standard whether the coins are above or below the legal weight, provided they are within the limits of "tolerance." The bulk of our gold coinage is in double-eagles, on which the allowance in the single piece is one-half grain; now if the law did not provide for weighing a large number of pieces together, there would be nothing to prevent a delivery to the treasurer of large amounts of these pieces each one of which might be three-eighths of a grain light. In delivering one million ounces or twenty million dollars in double-eagles, the coiner would be credited with the standard weight, although the actual weight would be about seven hundred and eighty-one ounces, or fourteen thousand five hundred and thirty dollars less than the amount required in weighing a number of pieces together. This allowance is unnecessarily large, and the limit has therefore been reduced, although still in excess of the actual results of the daily transactions of the mint.

In the proposed bill the deviation in weight allowed is as follows: In the double-eagle, one-half grain troy; in the eagle, three-eighths of a grain; in the half-eagle, one-quarter of a grain; in the three-dollar piece and quarter-eagle, one-sixth of a grain; and in the dollar piece, one-twelfth of a grain; in the half and quarter dollar silver pieces, one grain; and in the dime, one-half grain. In weighing a large number of pieces together, the deviation allowed in five thousand dollars' worth of double-eagles, eagles, half-eagles, and quarter-eagles, is one-hundredth of an ounce, (about eighteen cents;) and in three thousand dollars' worth of three-dollar pieces it is seven and a half-thousandths of an ounce; and in one thousand dollars' worth of dollar pieces, five-thousandths of an ounce; in one thousand dollars' worth of silver half and quarter dollar pieces, two-hundredths of an ounce; and in one hundred dollars' worth of dimes, one-hundredth of an ounce; the "tolerance" of weight being in the proposed bill only about one-fourth the amount now authorized in gold, and one-third the amount in silver, taking into consideration the relative quantities of the several denominations now coined. Experience has shown that the provision for tolerance in bulk is judicious; and effectual as a check against the issue of uniformly light pieces. It may be re-

marked, that as far as ascertained, the laws of other countries do not provide a tolerance for coins weighed in bulk. The "English coinage act of 1870," recently passed, makes no such provision.

METHOD OF ISSUING SILVER (SUBSIDIARY) COIN.

The act of February 21, 1853, provides that the silver coins of smaller denomination than one dollar "shall be paid out at the mint in exchange for gold coins at par in sums not less than one hundred dollars." It was evidently intended that these subsidiary or token coins should be issued only in exchange at par for gold coin. But the practice at the mint for many years has been to purchase all silver bullion offered at about \$1 22½ per ounce, which is above the market price, paying therefor in silver coin. The ounce of silver purchased is worth \$1 25 in the silver coin issued, weight for weight, so that the government really reserves a seignorage of two and one-half cents per ounce. The effect of the mint practice has been to put in circulation silver coins without regard to the amount required for purposes of "change," creating a discount upon silver coin, and bringing loss upon holders of any considerable amount. These coins are a legal tender for five dollars, but they are not received at the custom-house in payment of duties except for fractional portions of a dollar. The coins thus issued have accumulated, and are now at a large discount in Canada and California, and will again become burdensome at home when brought into circulation. The correct method of issuing silver coin is as was originally contemplated: to purchase with gold such an amount of silver bullion at market rates as is needed for coinage into fractional parts of a dollar; to issue the silver coins only in exchange for gold at par, and to require the manufacture of such coinage to cease whenever there is evidence of a redundancy. In the proposed bill the language is clear and explicit on this point, and these silver coins are made a legal tender for sums less than one dollar.

HISTORY OF SILVER AND GOLD DOLLARS.

The dollar unit, as money of account, was established by act of Congress April 2, 1792, and the same act provides for the coinage of a silver dollar "of the value of a Spanish milled or pillar dollar, as the same is now current." The silver dollar was first coined in 1794, weighing 416 grains, of which 371½ grains were pure silver, the fineness being 892.4 thousandths. The act of January 18, 1837, reduces the standard weight to 412½ grains, but increases the fineness to 900 thousandths, the quantity of pure silver remaining 371½ grains as before, and at these rates it is still coined in limited amount.

The act of March 3, 1849, directs the coinage of gold dollars. They were issued the same year weighing 25 ⁸/₁₀ grains, ⁹/₁₀ fine, 23.22 grains being pure gold. By the act of April 2, 1792, 371½ grains of pure silver and 24½ grains of pure gold were declared to be equivalent one with the other, and to the dollar of account. At that time, as now, in Great Britain, 113 grains of pure gold were very nearly the equivalent of the pound sterling. The value of £1 in federal money, therefore, was \$4.565; prior to this date, and during the confederation, the dollar of account, as compared with sterling currency, had been rated at 4s. 6d., and in precise accordance with this valuation, the congress of the confederation had established \$4.444 as the custom-house value of the pound sterling. The effect of the act of 1792 was really to reduce the value of our dollar of account, but apparently to increase the value of the pound sterling about 2½ per cent. By the act of June 28, 1834, the weight of fine gold to the dollar was reduced from 24.75 to 23.20 grains; and three years later, January 18, 1837, it was fixed at 23.22 grains, where it now remains. Comparing this latter weight with the pound sterling of 113 grains, we find an apparent increase of the value of £1 to \$4.8665, an advance of almost exactly 9½ per cent. upon the old valuation of \$4.444. We have here the explanation of the existing practice in this country of quoting sterling exchange at 9½ per cent. premium when it is really at par.

* New American Cyclopedia.

SILVER DOLLAR—ITS DISCONTINUANCE AS A STANDARD.

The coinage of the silver dollar piece, the history of which is here given, is discontinued in the proposed bill. It is by law the dollar unit, and assuming the value of gold to be fifteen and one-half times that of silver, being about the mean ratio for the past six years, is worth in gold a premium of about three per cent., (its value being \$1 03.12) and intrinsically more than seven per cent. premium in our other silver coins, its value thus being \$1 07.42. The present laws consequently authorize both a gold dollar unit and a silver dollar unit, differing from each other in intrinsic value. The present gold dollar piece is made the dollar unit in the proposed bill, and the silver dollar piece is discontinued. If, however, such a coin is authorized, it should be issued only as a *commercial dollar*, not as a standard unit of account, and of the exact value of the Mexican dollar,* which is the favorite for circulation in China and Japan and other Oriental countries.

METRIC WEIGHTS RECOMMENDED FOR USE IN THE MINT.

In the proposed bill the weight and fineness of the gold and silver coins remain unchanged, but as the *gram* (the metric unit) is now a legal unit of weight, (act July 28, 1866,) the weight of the different coins in the schedule annexed has been given in *grams* as well as in troy grains. The propriety of substituting the metric system authorized by law for the present mixed system of ounces and decimals for weighing bullion; of pennyweights and grains in weighing and adjusting coin; and of grams and milligrams in the process of assaying at the mint, has been suggested. This can be done with little inconvenience, and is recommended.

Should the metric system of weights be adopted as suggested, exclusively for use in the mint, the following deviation in metric weight may be substituted for those in troy weight above given: In weighing single pieces, for each double-eagle, thirty-three and one-third milligrams; for the eagle, twenty-five milligrams; for the half-eagle, fifteen milligrams; for the three-dollar piece, twelve milligrams; for the quarter-eagle, ten milligrams; and for the gold dollar piece, five milligrams: for the *silver* half dollar and quarter dollar pieces, sixty-two and a half milligrams; and for the dime, fifty milligrams.

In weighing pieces in bulk the following metric deviations may be substituted: In deliveries of five thousand dollars' worth of double-eagles, eagles, half-eagles, and quarter-eagles, three hundred milligrams, (about eighteen cents;) in deliveries of three thousand dollars' worth of three-dollar pieces, one hundred and eighty milligrams; and of one thousand dollar pieces, sixty milligrams; in deliveries of one thousand dollars' worth of half dollar and quarter dollar pieces, six hundred and twenty-five milligrams; and of one hundred dollars' worth of dimes, six hundred and twenty-five milligrams.

Our silver coinage, by an increase of about one-half of one per cent. in weight, would be rendered metric, so that two dimes would weigh five grams, thereby being equal in weight to the nickel five-cent piece, and ten of these dimes would be the exact equivalent in weight and fineness of the standard legal-tender silver five-franc piece of France, which is of the value of \$0 96.48. The difference of value between the gold and silver

* Assuming the value of gold to be fifteen and one-half times that of silver, the French five-franc piece is worth about ninety-six and one-half cents, (96.4784,) the standard Mexican dollar \$1 04.90, our silver dollar piece \$1 03.12, and two of our half-dollar pieces 96 cents.

coins would still be sufficient to prevent the exportation of the latter, judging from their relative value for the past sixty years,* and if any change is to be made in the weight of the silver coins this is suggested.

INTERNATIONAL COINAGE.

The United States would undoubtedly agree to any system of international coinage having simple relations to some acknowledged unit of weight, first agreed upon by England and France, in order to simplify the present absurd system of calculating exchange; but if it is proposed to lead the way in such a system, then the metric system presents advantages over any other proposed. It is probable that the larger portion of our gold coins (to-day) in circulation would, if weighed together, fall short of their original weight (arising chiefly from abrasion) more than three dollars on the thousand dollars, which is the difference between the values of the metric coins proposed and of the existing coins, so that if the existing coinage of the country were to be exchanged weight for weight for the proposed metric coins there would probably be very little difference.

ACKNOWLEDGMENTS.

In the preparation of the bill I have been greatly indebted to Robert Patterson, Franklin Peale, and J. Ross Snowden, of Philadelphia; L. A. Garnett and John Hewston, jr., of San Francisco; E. B. Elliott, of the Treasury Department, and to the officers of the different mints and assay offices for notes and suggestions, and particularly to Hon. H. R. Linderman, late Director of the Mint, who has been associated with me by your direction in the final revision as now presented.

Since the year 1837 no revision of the various mint laws has been attempted, and the necessity and importance of such a work have long been experienced. The proposed bill has been prepared with great care, and if it shall receive the indorsement of Congress and become a law it is confidently believed that it will add much to the efficient and economical administration of this very important branch of the government service.

APPENDIX.

Tables showing the weight and fineness of all the coins of the United States, both in troy and metric weights, are appended; also exhibiting the tolerance now authorized and the tolerance proposed.

A schedule is also inclosed exhibiting the wastage annually at the Mint at Philadelphia from 1857 to 1869.

A copy of the "coinage act, 1870," which has recently passed the English parliament is also given.

Respectfully submitted.

JNO. JAY KNOX,

Deputy Comptroller of the Currency.

Hon. GEORGE S. BOUTWELL,

Secretary of the Treasury.

* From the commencement of the seventeenth century the value of gold in comparison with silver gradually advanced, reaching in the middle of that century fourteen and one-half times that of silver; during the twenty years previous to 1809 gold averaged 14.9, nearly fifteen times the value of silver; since which time it gradually advanced, averaging, during the thirty years previous to 1849, just prior to the discovery of the new gold fields, nearly fifteen and seven-eighths times (15.82) that of silver; in 1859 its relative value was 15.2, since which time it has advanced to 15.6, the point it now holds. (Report of Special Commissioner of Revenue, 1869, Elliott's Tables, page 141.)

APPENDICES.

Appendix A.—Proposed coinage bill.

Appendix B.—Table exhibiting wastage at the Mint at Philadelphia, from 1857 to 1869.

Appendix C.—Tables of United States coinage existing and proposed.

Table I.—Coinage of United States.

Table II.—Coinage proposed in accompanying bill.

Table III.—Metric coinage proposed.

Table IV.—Comparison of coinage existing and proposed.

Appendix D.—English coinage act, 1870.

APPENDICES.

APPENDIX A.—PROPOSED BILL.

A BILL revising the laws relative to the mints, assay offices, and coinage of the United States.

SECTION 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Mint of the United States is hereby established as a bureau of the Treasury Department, embracing in its organization and under its control all mints for the manufacture of coin, or assay offices for the stamping of bars which are now or which may be hereafter authorized by law. The chief officer of the said bureau shall be denominated the Director of the Mint of the United States, and shall be under the general direction of the Secretary of the Treasury. He shall be appointed by the President on the recommendation of the Secretary of the Treasury, by and with the advice and consent of the Senate, and shall hold his office for the term of five years, unless sooner removed by the President, upon reasons to be communicated by him to the Senate.

Mint bureau.

Director of the mint.

SEC. 2. *And be it further enacted,* That the Director shall have the general supervision of all mints and assay offices, and shall make an annual report to the Secretary of the Treasury of their operations, at the close of each fiscal year; and from time to time such additional reports setting forth the operations and condition of such institutions as the Secretary shall require. He shall lay before the Secretary the annual estimates for their support. He shall appoint the necessary clerks to discharge such duties as he shall direct, whose appointment and rate of compensation shall first be approved by the Secretary of the Treasury. He shall also have charge of all other matters, statistical and otherwise, tending to the development of the mining industry of the precious metals.

Duties of director.

SEC. 3. *And be it further enacted,* That the officers of the mints established for the manufacture of coin shall be a superintendent, an assayer, a melter and refiner, and a coiner, and for the Mint at Philadelphia, an engraver, all to be appointed by the President of the United States by and with the advice and consent of the Senate.

Officers of the mints.

SEC. 4. *And be it further enacted,* That the superintendent of each mint shall have the control thereof, the superintendence of the officers and persons employed therein, and the supervision of the business thereof, subject to the direction of the Director. He shall make to the Director reports at such times and according to such forms as he may prescribe, which shall exhibit in detail, and under appropriate heads, the deposits of bullion, the amount of gold, silver, and minor coinage, and the amount of unparted, standard, and refined bars issued, and such other statistics and information as may be required by the Director.

Duties of superintendents.

The superintendent shall also receive and safely keep, until legally withdrawn, all moneys or bullion which shall be for the use or support of the mint; he shall receive all bullion brought to the mint for assay or coinage; shall be the keeper of all bullion or coin in the mint, except while the same is legally placed in the hands of other officers, and shall deliver all coins struck at the mint to the persons to whom they shall be legally payable. From the report of the assayer and the weight of the bullion he shall compute the whole value of each deposit, and also the amount of the charges or deductions, if any; of all of which he shall give a detailed memorandum to the depositor; and he shall also give at the same time, under his hand, a certificate of the net amount of the deposit, to be paid in coins or bars of the same species of bullion as that deposited, the correctness of which certificate shall be verified by the assayer, who shall countersign the same; he shall keep and render quarter-yearly to the Director, for the purpose of adjustment, according to such forms as may be prescribed by the Secretary of the Treasury, regular and faithful accounts of his transactions with the other officers of the mint and the depositors, and in all cases of transfer of coin or bullion he shall give and receive vouchers stating the amount and character of such coin or bullion. He shall also render to the Director a monthly statement of the ordinary expenses of the mint or assay office under his charge; he shall also appoint all assistants, clerks, (one of whom shall be designated chief clerk,) and workmen employed under his superin-

Assist'ts, clerks, and workmen—how appointed.

tendence, provided that no person shall be appointed to employment in the offices of the assayer, melter and refiner, coiner, or engraver, except on the recommendation and nomination in writing of these officers respectively. The superintendent shall forthwith report to the Director the names of all persons appointed by him, the duties to be performed, the rate of compensation, the appropriation from which compensation is to be made, and the grounds of the appointment. If thereupon the Director shall disapprove of the same the appointment shall be vacated.

Of the assayers.

SEC. 5. *And be it further enacted*, That the assayer shall correctly assay all metals and bullion whenever such assays are required in the operations of the mint; he shall also make assays of coins when instructed to do so by the superintendent.

Of the melters and refiners.

SEC. 6. *And be it further enacted*, That the melter and refiner shall execute all the operations which are necessary in order to form ingots of standard silver or gold and alloys for minor coinage suitable for the coiner, from the metals legally delivered to him for that purpose. He shall also execute all the operations which are necessary, in order to form standard bars or disks, conformable in all respects to the law, from the gold and silver bullion delivered to him for that purpose. He shall keep a careful record of all transactions with the superintendent, noting the weight and character of the bullion, and shall be responsible for all bullion delivered to him until the same is returned to the superintendent, and the proper vouchers obtained.

Of the coiners.

SEC. 7. *And be it further enacted*, That the coiner shall execute all the operations which are necessary in order to form coins, conformable in all respects to the law, from the standard gold and silver ingots and alloys for minor coinage legally delivered to him for this purpose. He shall be responsible for all bullion delivered to him, until the same is returned to the superintendent and the proper vouchers obtained.

Of the engraver.

SEC. 8. *And be it further enacted*, That the engraver shall prepare from the original dies already authorized all the working dies required for use in the coinage of the several mints; and when new coins or devices are authorized, shall, if required by the Director, prepare the devices, models, molds, and matrices, or original dies for the same; but the Director shall nevertheless have power, with the approval of the Secretary of the Treasury, to engage temporarily for this purpose the services of one or more artists distinguished in their respective departments, who shall be paid for such service from the contingent appropriation for the Mint at Philadelphia.

Officers pro tempore.

SEC. 9. *And be it further enacted*, That when any officer of a mint or assay office shall be temporarily absent on account of sickness, or any other sufficient cause, it shall be lawful for the superintendent, with the consent of the said officer, to appoint some person attached to the mint to act in the place of such officer during his absence, which officer shall be responsible for the acts of his representative. In case of the temporary absence of the superintendent, the chief clerk shall act in his place, but all such appointments shall be forthwith reported to the Director for his approval, and in all cases whatsoever the principal shall be responsible for the acts of his representative. In case of the temporary absence of the Director, the Secretary of the Treasury shall designate some one to act in his place.

Oath of office.

SEC. 10. *And be it further enacted*, That every officer, assistant, and clerk of the mint shall, before he enters upon the execution of his office, take an oath or affirmation before some judge of the United States, or judge of the superior court, or any court of record of any State, faithfully and diligently to perform the duties thereof, in addition to other official oaths prescribed by law; which oaths, duly certified, shall be transmitted to the Secretary of the Treasury; and the superintendent at each mint may require such oath or affirmation from any of the employés of the mint.

Bond and security required.

SEC. 11. *And be it further enacted*, That the superintendent, assayer, the melter and refiner, and coiner of each mint, before entering upon the execution of their respective offices, shall become bound to the United States, with one or more sureties approved by the Secretary of the Treasury, in the sum of not less than ten nor more than fifty thousand dollars, with condition for the faithful and diligent performance of the duties of their offices: *Provided*, The Secretary of the Treasury may at discretion increase the bonds of the superintendent. Similar bonds may be required of the assistants and clerks, in such sums as the superintendent shall determine, with the approbation of the Director, provided

that the same shall not be construed so as to relieve the superintendent or other officers from liability to the United States, for acts, omissions, and negligence of their subordinates or employés.

SEC. 12. *And be it further enacted*, That there shall be allowed to officers of the mint the following salaries, per annum: To the Director \$5,500, and necessary traveling expenses in visiting the different mints and assay offices; to the superintendents of the mints at Philadelphia and San Francisco, \$5,000; to the assayers, melters and refiners, and coiners of those mints, each, \$3,500; to the engraver of the Mint at Philadelphia, \$3,000; to the superintendent of the mint at Carson City, and all other mints now established, or hereafter to be established, a salary of not exceeding \$3,500; and to the assayer, melter, and refiner, and coiner of such institutions, each a salary of not exceeding \$3,000; to the assistants and clerks such annual salaries shall be allowed as the superintendent may determine, with the approbation of the Director. To the workmen shall be allowed such wages, to be determined by the superintendent, as may be customary and reasonable, according to their respective stations and occupations; and the salaries provided for in this section, and the wages of the workmen permanently engaged, shall be payable in monthly installments.

SEC. 13. *And be it further enacted*, That the standard for both gold and silver coins of the United States shall hereafter be such, that of one thousand parts by weight, nine hundred shall be of pure metal, and one hundred of alloy; and the alloy of the silver coins shall be of copper, and the alloy of the gold coins shall be of copper and silver, provided that the silver does not exceed one-tenth of the whole alloy.

SEC. 14. *And be it further enacted*, That of the gold coins, the weight of the double-eagle or twenty-dollar piece shall be five hundred and sixteen grains; that of the eagle or ten-dollar piece, two hundred and fifty-eight grains; that of half-eagle or five-dollar piece, one hundred and twenty-nine grains; that of the quarter-eagle or piece of two and one-half dollars, sixty-four and one-half grains; that of the three-dollar piece, seventy-seven and four-tenth grains; that of the one-dollar piece, or unit of value, twenty-five and eight-tenth grains; and these coins shall be a legal tender in all payments.

SEC. 15. *And be it further enacted*, That of the silver coins, the weight of the half-dollar, or piece of fifty cents, shall be one hundred and ninety-two grains; and that of the quarter-dollar and dime shall be respectively one-half and one-fifth of the weight of said half-dollar. That the silver coin issued in conformity with the above section shall be a legal tender in any one payment of debts for all sums less than one dollar.

SEC. 16. *And be it further enacted*, That the standard for minor coinage shall be an alloy of copper and nickel, to be composed of three-fourths copper and one-fourth nickel.

SEC. 17. *And be it further enacted*, That of the copper-nickel coinage the weight of the piece of five cents shall be five grams, or seventy-seven and sixteen-hundredths grains troy; that of the three-cent piece, three grams, or forty-six and thirty-hundredths grains; and of the one-cent piece, one and one-half grams, or twenty-three and fifteen-hundredths grains; which coins shall be a legal tender in any one payment to the amount of twenty cents.

SEC. 18. *And be it further enacted*, That no coins, either of gold, silver, or minor coinage, shall hereafter be issued from the mint, other than those of the denominations, standards, and weights herein set forth.

SEC. 19. *And be it further enacted*, That upon the coins of the United States there shall be the following devices and legends: Upon one side of each of the said coins there shall be an impression emblematic of liberty, with an inscription of the word LIBERTY, and the year of the coinage; and upon the reverse of each coin there shall be the figure or representation of an eagle, with the inscriptions UNITED STATES OF AMERICA and E PLURIBUS UNUM, and a designation of the value of the coin; but on the reverse of the gold dollar and three dollar piece, the dime, five, three, and one cent pieces, the figure of the eagle shall be omitted; and the Director of the Mint, with the approval of the Secretary of the Treasury, may cause the motto, "In God we Trust," to be placed upon such coins as shall admit of such legends.

SEC. 20. *And be it further enacted*, That, at the option of the owner, gold or silver may be cast into bars or ingots, or formed into disks of either fine metal, or of standard fineness, or unrefined, as he may prefer, with a stamp upon the same, designating the weight and fineness, and

with such devices impressed thereon as may be deemed expedient to protect against fraudulent imitations; provided that no such bars, ingots, or disks shall be issued of a less weight than five ounces, and that no valuation shall be stamped upon the same.

Conditions of deposit of bullion. SEC. 21. *And be it further enacted*, That any owner of gold and silver bullion may deposit the same at the mint, to be formed into coin or bars for his benefit: *Provided*, That it shall be lawful to refuse any deposit of less value than one hundred dollars, and any bullion so base as to be unsuitable for the operations of the mint: *And provided also*, That when gold and silver are combined, if either of these metals be in such small proportion that it cannot be separated advantageously, no allowance shall be made to the depositor for the value of such metal.

Receipt to be given. SEC. 22. *And be it further enacted*, That when bullion is brought to the mint for coinage it shall be weighed by the superintendent in the presence of the depositor, when practicable, and a receipt given, which shall state the description and weight of the bullion: *Provided*, That when the bullion is in such a state as to require melting before its value can be ascertained, the weight after melting shall be considered as the true weight of the bullion deposited.

Assay of bullion. SEC. 23. *And be it further enacted*, That from every parcel of bullion deposited for coinage, bars, or disks, the superintendent shall deliver to the assayer a sufficient portion for the purpose of being assayed; but all such bullion remaining from the operations of the assay shall be returned to the superintendent by the assayer.

Assayer to report to superintendent. SEC. 24. *And be it further enacted*, That the assayer shall report to the superintendent the quality or standard of the bullion assayed by him; and he shall also communicate to the superintendent such information as will enable him to compute the amount of the charges hereinafter provided for, to be made to the depositor for the expenses of converting the bullion into standard metal fit for coinage.

Charges of the mint. SEC. 25. *And be it further enacted*, That the only charge on deposits of bullion for coin, bars, or disks, shall be as follows: For refining, when the bullion is below standard; for toughening, when metals are contained in it which render it unfit for coinage; for copper used for alloy, when the bullion is above standard; for silver introduced into the alloy of gold; for separating the gold and silver, when these metals exist together in the bullion; for the preparation of bars, or disks; and the rate of these charges shall be fixed, from time to time, by the Director, with the concurrence of the Secretary of the Treasury, so as to equal but not to exceed, in their judgment, the actual average expense to each mint of the material and labor employed in each of the cases aforementioned.

Assayer to verify calculations of value. SEC. 26. *And be it further enacted*, That the assayer shall verify all calculations made by the superintendent of the value of deposits, and if satisfied of the correctness thereof, shall countersign the certificate of the same heretofore required to be given by the superintendent to the depositor.

No deposits of silver for coinage received. SEC. 27. *And be it further enacted*, That silver bullion, deposited by private holders, shall be paid for in silver bars, or disks, only, and that no deposit for coinage into silver coin shall be received: *Provided, however*, That silver bullion contained in gold deposits, and separated therefrom, may be paid for in silver coin at such valuation as may be from time to time established by the Director.

Purchase of silver bullion for coinage. SEC. 28. *And be it further enacted*, That in order to procure bullion for the silver coinage, authorized by this act, the superintendent of each mint shall, with the approval of the Director as to price, terms, and quantity, purchase such bullion with the gold coins in the bullion fund. The gain arising from the coinage of such bullion into coin of a nominal value, exceeding the cost value thereof, shall be credited to a special fund denominated the "silver profit fund." This fund shall be charged with the wastage incurred in the silver coinage, and with the expense of distributing said coins as hereinafter provided; the balance to the credit of this fund shall be from time to time, and at least twice a year, paid into the treasury of the United States.

Silver coin issued only in exchange for gold. SEC. 29. *And be it further enacted*, That such coins shall be paid out at the mints only in exchange for gold coins at par, and in sums not less than one hundred dollars, and it shall be lawful, also, to transmit parcels of the same, from time to time, to the assistant treasurers, depositaries, and other officers of the United States, under general regulations

proposed by the Director of the Mint, and approved by the Secretary of the Treasury: *Provided*, That nothing herein contained shall hinder the payment of silver coins for silver parted from gold as above provided, or for change less than one dollar in settlements for gold deposits.

SEC. 30. *And be it further enacted*, That in order to procure the metal for the minor coinage of copper-nickel authorized by this act, a sum not exceeding one hundred thousand dollars in lawful money of the United States shall be deposited by the Secretary of the Treasury with the superintendent of the Mint at Philadelphia, at which establishment only, until otherwise provided by law, such minor coinage shall be carried on. With this fund the superintendent shall, with the approval of the Director as to price, terms, and quantity, purchase the metals required for such coinage. The gain arising from the coinage of such metals into coin of a nominal value, exceeding the cost thereof, shall be credited to the special fund denominated the "minor coinage profit fund." This fund shall be charged with the wastage incurred in such coinage, and with the expenses of distributing said coins as hereinafter provided. The balance to the credit of this fund, and any balance of profits accrued from minor coinage under former acts, shall be from time to time, and at least twice a year, paid into the treasury of the United States.

Manufacture of copper-nickel coins.

SEC. 31. *And be it further enacted*, That it shall be the duty of the superintendent to deliver the copper-nickel coins in exchange for their legal equivalent in other money to any person who shall apply for them: *Provided*, That the sum asked for shall not be less than a certain amount to be previously determined by him, and that it be not so great as in his judgment to interfere with the capacity of the mint to supply other applicants.

Issue of copper-nickel coins.

SEC. 32. *And be it further enacted*, That the copper-nickel coins may, at the discretion of the superintendent, be delivered in any of the principal cities and towns of the United States, at the cost of the mint for transportation.

Distribution of.

SEC. 33. *And be it further enacted*, That the copper-nickel coins authorized by this act shall be exchangeable at par at the Mint in Philadelphia for every other coin of copper, bronze, or copper-nickel (except the three and five cent copper-nickel pieces) heretofore authorized by law; and it shall be lawful for the Treasurer and the several assistant treasurers and depositaries of the United States to redeem, in national currency, under such rules and regulations as may be prescribed by the Secretary of the Treasury, the copper-nickel coin herein authorized to be issued, when presented in sums of not less than fifty dollars, (\$50;) and whenever under this authority these coins are presented for redemption in such quantity as to show the amount outstanding to be redundant, the Secretary of the Treasury is authorized and required to direct that such minor coinage shall cease until otherwise ordered by him.

Exchangable for all other base metal coinage. Redemption.

SEC. 34. *And be it further enacted*, That parcels of bullion shall be from time to time transferred by the superintendent to the melter and refiner; that a careful record of these transfers, noting the weight and character of the bullion, shall be kept, and that vouchers shall be taken for the delivery of the same, duly receipted by the melter and refiner, and that the bullion thus placed in the hands of the melter and refiner shall be subjected to the several processes which may be necessary to form it into ingots of the legal standard and of a quality suitable for coinage.

Melter and refiner to prepare standard ingots.

SEC. 35. *And be it further enacted*, That the ingots thus prepared shall be assayed by the assayer, and if they prove to be within the limit allowed for deviation from the standard, the assayer shall certify the fact to the superintendent, who shall thereupon receive the same and transfer them to the coiner.

Ingots to be assayed.

SEC. 36. *And be it further enacted*, That no ingots shall be used for coinage which differ from the legal standard more than the following proportions, namely: In gold ingots, one-thousandth; in silver ingots, two and one-half thousandths; in copper-nickel ingots, twenty-five thousandths, in the proportion of nickel.

Tolerance in fineness.

SEC. 37. *And be it further enacted*, That the melter and refiner shall prepare all bars, ingots, or disks required for the payment of deposits, but the fineness thereof shall be ascertained and stamped thereon by the assayer.

Bars—how prepared & stamped.

Gold.—Tolerance in weight of single pieces; tolerance in bulk.

SEC. 38. *And be it further enacted*, That in adjusting the weights of the gold coins the following deviations shall not be exceeded in any single piece: In the double-eagle, one-half of a grain; in the eagle, three-eighths of a grain; in the half-eagle, one-fourth of a grain; in the three-dollar piece, and quarter-eagle, one-sixth of a grain; and in the one-dollar piece, one-twelfth of a grain. And that in weighing a large number of pieces together when delivered from the coiner to the superintendent, and from the superintendent to the depositor, the deviation from the standard weight shall not exceed one-hundredth of an ounce in five thousand dollars' worth of double-eagles, eagles, half-eagles, or quarter-eagles; seven-and-a-half-thousandths of an ounce in three thousand dollars' worth of three-dollar pieces; and five-thousandths of an ounce in one thousand one-dollar pieces.

Silver.—Tolerance in weight of single pieces; tolerance in bulk.

SEC. 39. *And be it further enacted*, That in adjusting the weight of silver coins the following deviations shall not be exceeded in any single piece: In the half and quarter dollar, one grain; and in the dime, half a grain; and that in weighing large numbers of pieces together when delivered from the coiner to the superintendent, and from the superintendent to the depositor, the deviations from the standard weight shall not exceed the following limits: Two-hundredths of an ounce in one thousand dollars' worth of half-dollars, or quarter-dollars; and one-hundredth of an ounce in one hundred dollars' worth of dimes.

Copper nickel: tolerance.

SEC. 40. *And be it further enacted*, That in adjusting the weight of the copper-nickel coins provided by this act, there shall be no greater deviation allowed than three grains for the five-cent pieces, and two grains for the three and one-cent pieces.

Delivery of coins to superintendent, who shall test their legal weight.

SEC. 41. *And be it further enacted*, That the coiner shall, from time to time, as the coins are prepared, deliver them over to the superintendent, who shall keep a careful record of their kind, number, and weight; and that in receiving the coins it shall be the duty of the superintendent to ascertain, by the trial of a number of single pieces separately, whether the coins of that delivery are within the legal limits of the standard weight; and if his trials for this purpose shall not prove satisfactory, he shall cause all the coins of this delivery to be weighed separately, and such as are not of legal weight shall be defaced and delivered to the melter and refiner as standard bullion, to be again formed into ingots and recoined; or the whole delivery may, if more convenient, be remelted.

Coins to be reserved for the annual assay.

SEC. 42. *And be it further enacted*, That at every delivery of coins made by the coiner to the superintendent, it shall be the duty of the superintendent of each mint, in the presence of the assayer, to take indiscriminately a certain number of pieces of each variety for the annual trial of coins, (the number being prescribed by the Director,) which shall be carefully sealed up, labelled, and deposited in the pyx appropriated for the purpose, kept under the joint care of the superintendent and assayer, and so secured that neither can have access to its contents without the presence of the other; which pieces, except those coined at that institution, shall be transmitted quarterly to the Mint at Philadelphia. Other pieces may at the same time be taken for such tests as the Director shall prescribe.

Superintendent's account with coiner.

SEC. 43. *And be it further enacted*, That in the superintendent's account with the coiner, the latter shall be debited with the amount in weight of standard metal of all the bullion placed in his hands, and credited with the amount, also by weight, of all coins, clippings, and other bullion delivered by him to the superintendent. Once at least in every year, at such time as the superintendent shall appoint, there shall be an accurate and full settlement of the accounts of the respective operative officers, (the coiner, and melter and refiner,) at which time the said officers shall deliver up to the superintendent all the bullion and coin in their possession, respectively, accompanied by statements of all the bullion delivered to them since the last annual settlement, and all the bullion returned by them during the same period, including the amount returned for the purpose of settlement. Counter statements shall be presented by the superintendent.

Annual settlement.

Allowance for wastage.

SEC. 44. *And be it further enacted*, That when the bullion and coin has all been surrendered up to the superintendent it shall be his duty to examine the accounts and statements rendered by the operative officers (for the same,) and if the bullion falls short of that delivered, the difference between the amount charged and credited to each officer shall be allowed as necessary wastage, provided the superintendent shall be

satisfied that there has been a bona fide waste of the precious metals, and provided, also, that the amount shall not exceed, in the case of the melter and refiner, one thousandth of the whole amount of gold and one and one-half thousandths of the silver bullion delivered to him since last annual settlement; and in the case of the coiner, one thousandth of the whole amount of silver, and one-half thousandth of the whole amount of gold, that has been delivered to him by the superintendent; provided that all copper used in the alloy of gold and silver bullion shall be separately charged to the melter and refiner and accounted for by him.

SEC. 45. *And be it further enacted*, That it shall also be the duty of the superintendent to forward a correct statement of his balance-sheet at the close of such settlement to the Director, who shall compare the total amount of gold and silver bullion and coin on hand with the total liabilities of the mint. A corresponding statement of the ordinary account, and the moneys therein, shall also be made by the superintendent.

SEC. 46. *And be it further enacted*, That when the coins or bars which are the equivalent to any deposit of bullion are ready for delivery, they shall be paid over to the depositor, or his order, by the superintendent; and the payments shall be made, if demanded, in the order in which the bullion shall have been brought to the mint; but in cases where there is delay in manipulating a refractory deposit, or for any other unavoidable cause, the payment of subsequent deposits, the value of which is known, shall not be delayed thereby; and that in the denominations of coins delivered, the superintendent shall comply with the wishes of the depositor, unless when impracticable or inconvenient to do so.

SEC. 47. *And be it further enacted*, That unparted bars may be exchanged at any of the respective coinage mints for fine bars on such terms and conditions as may be prescribed by the Director, with the approval of the Secretary of the Treasury.

SEC. 48. *And be it further enacted*, That for the purpose of enabling the mints and assay office in New York to make returns to depositors with as little delay as possible, it shall be the duty of the Secretary of the Treasury to keep in the said mints and assay office, when the state of the treasury will admit thereof, such an amount of public money, or bullion procured for the purpose, as he shall judge convenient and necessary, out of which those who bring bullion to the said mints and assay office may be paid the value thereof, in coin or bars as soon as practicable after this value has been ascertained; and on payment thereof being made the bullion so deposited shall become the property of the United States; and that the Secretary of the Treasury may at any time withdraw the bullion fund, or any portion thereof.

SEC. 49. *And be it further enacted*, That to secure a due conformity in the gold and silver coins to their respective standards of fineness and weight, an annual trial shall be made of the pieces reserved at the several mints for this purpose, before the judge of the district court of the United States for the eastern district of Pennsylvania, the assayer of the assay office, New York, and such other persons as the President shall from time to time designate for that purpose, who shall meet as commissioners, at the Mint in Philadelphia, for the performance of this duty, on the second Monday in February, annually, and may continue their meetings by adjournment, if necessary; and if a majority of the commissioners shall fail to attend at any time appointed for their meeting, then the Director of the Mint shall call a meeting of the commissioners at such other time as he may deem convenient; and that before these commissioners, or a majority of them, and in the presence of the Director of the Mint, such examination shall be made of the reserved pieces as shall be judged sufficient; and if it shall appear that these pieces do not differ from the standard fineness and weight by a greater quantity than is allowed by law, the trial shall be considered and reported as satisfactory; but if any greater deviation from the legal standard or weight shall appear, this fact shall be certified to the President of the United States; and if, on a view of the circumstances of the case, he shall so decide, the officer or officers implicated in the error shall be thenceforward disqualified from holding their respective offices.

SEC. 50. *And be it further enacted*, That for the purpose of securing a due conformity in weight of the coins of the United States to the provisions of this act, the brass troy pound weight procured by the minister of the United States at London, in the year one thousand eight hundred and twenty-seven, for the use of the Mint, and now in the custody of the Mint at Philadelphia, shall be the standard troy pound

Settlement and transmission of accounts.

Order in which depositors shall be paid.

Exchange of bullion authorized.

Bullion fund.

Annual trial of the pyx.

Standard troy pound of the mint

of the Mint of the United States, conformably to which the coinage thereof shall be regulated.

Corresponding weights for each mint and assay office.

SEC. 51. *And be it further enacted*, That it shall be the duty of the Director of the Mint to procure for each mint and assay office, and safely to keep thereat, a series of standard weights corresponding to the aforesaid troy pound, consisting of an one-pound weight and the requisite subdivisions and multiples thereof, from the hundredth part of a grain to twenty-five pounds; and that the troy weights ordinarily employed in the transactions of each mint and assay offices shall be regulated according to the above standards at least once in every year, under the inspection of the superintendent and assayer, and the accuracy of those used at the Mint at Philadelphia shall be tested annually, in the presence of the assay commissioners, on the day of the annual assay.

Annual destruction of dies.

SEC. 52. *And be it further enacted*, That the working dies at each mint shall, at the end of each calendar year, be defaced and destroyed by the coiner in the presence of the superintendent and assayer.

Medals.

SEC. 53. *And be it further enacted*, That national and other medals may be prepared at the Mint at Philadelphia, under such regulations as the superintendent, with the approval of the Director, may prescribe: *Provided*, That such work does not interfere with the regular coinage operations of said Mint.

Mint charges to be paid into the treasury.

SEC. 54. *And be it further enacted*, That the moneys arising from all charges and deductions on and from gold and silver bullion, and the manufacture of medals, and from all other sources, except as hereinbefore provided, shall from time to time be paid and covered into the treasury of the United States; and no part of such deductions or medal charges, or profit on silver, or minor coinage shall be expended in salaries or wages; but all expenditures of the mints and assay offices not herein otherwise provided for shall be paid from appropriations made by law on estimates furnished by the Secretary of the Treasury.

New York assay office. Officers and business of.

SEC. 55. *And be it further enacted*, That the officers of the United States assay office at New York shall be a superintendent, an assayer, and a melter and refiner, who shall be appointed by the President, by and with the advice and consent of the Senate. The business of the assay office shall be in all respects similar to that of the mints, except that bars only, refined or unrefined, and not coin shall be manufactured therein; and no silver, copper, or nickel shall be purchased for small silver, or minor coinage. All bullion intended by the depositor to be converted into coins of the United States shall, as soon as assayed, parted, and refined, and its net value certified, be transferred to the Mint at Philadelphia, under such directions as shall be made by the Secretary of the Treasury, at the expense of the contingent fund of the Mint, and shall be there coined and the proceeds returned to the assay office; and the Secretary of the Treasury is hereby authorized to make the necessary arrangements for the adjustment of the accounts upon such transfers between the respective offices.

Duties of officers.

SEC. 56. *And be it further enacted*, That the duties of superintendent, assayer, and melter and refiner of said office shall correspond to those of superintendents, assayers, and melter and refiners of the mints, and all parts of this act relating to the mints and their officers, the duties and responsibilities of such officers, and others employed therein, the oath to be taken, and the bonds and sureties to be given by them, (as far as the same may be applicable,) shall extend to the assay office hereby established, and to its officers, assistants, clerks, workmen, and others employed therein.

Salaries of officers, assistants, and employes.

SEC. 57. *And be it further enacted*, That there shall be allowed to the officers of the assay office at New York the following salaries per annum: To the superintendent five thousand dollars; to the assayer, and melter and refiner, each three thousand five hundred dollars; and the salaries to assistants and clerks, and wages to workmen, and their manner of appointment, shall be determined and regulated as heretofore directed in regard to the mints.

Regulations.

SEC. 58. *And be it further enacted*, That the operations of melting, parting, refining, and assaying in the said office, shall be under the general directions of the Director of the Mint, in subordination to the Secretary of the Treasury; and it shall be the duty of the said Director to prescribe such regulations and to order such tests as shall be requisite to insure faithfulness, accuracy, and uniformity in the operations of the said office.

Assay offices at Denver and Boise City.

SEC. 59. *And be it further enacted*, That the business of the branch mint at Denver, which shall hereafter be conducted as an assay office, the assay office at Boise City, Idaho, and all other assay offices now established,

or hereafter to be established, shall be confined to the receipt of gold and silver bullion, melting and refining by fluxes, assay, and return to depositors of the same, in bars, with the weight and fineness stamped thereon.

SEC. 60. *And be it further enacted*, That the officers of such assay offices, when their services are necessary, shall consist of an assayer, who shall have charge thereof, and a melter, to be appointed by the President, by and with the advice and consent of the Senate; and the assayer may employ as many clerks, workmen, and laborers, under the direction of the Secretary of the Treasury, as may be provided for by law. The salaries of said officers and clerks shall not exceed the following: To the assayer, the sum of three thousand dollars; to the melter, the sum of two thousand five hundred dollars; to the clerks, eighteen hundred dollars each; and the subordinate workmen and laborers shall receive such wages as are customary, according to their respective stations and occupations. Officers, clerks, and workmen's salaries.

SEC. 61. *And be it further enacted*, That the officers and clerks to be appointed at such assay offices, before entering upon the execution of their offices, shall take an oath or affirmation before some judge of the United States, or of the supreme court of said Territory, as prescribed by the act of July twenty, eighteen hundred and sixty-two, and each become bound to the United States of America, with one or more sureties, to the satisfaction of the Director of the Mint, or of one of the judges of the supreme court of the State or Territory in which the same may be located, and of the Secretary of the Treasury, with the condition of the faithful performance of the duties of their offices; and the said assayers shall discharge the duties of disbursing agents for the payment of the expenses of their respective assay offices. Oath of office. Bond and surety required.

SEC. 62. *And be it further enacted*, That the general direction of the business of said assay offices of the United States shall be under the control and regulation of the Director of the Mint, subject to the approbation of the Secretary of the Treasury; and for that purpose, it shall be the duty of the said Director to prescribe such regulations and to require such returns periodically and occasionally, and to establish such charges for melting, assaying, and stamping bullion, as shall appear to him to be necessary for the purpose of carrying into effect the intention of this act in establishing such assay offices. General direction.

SEC. 63. *And be it further enacted*, That all the provisions of this act for the regulation of the mints of the United States, and for the government of the officers and persons employed therein, and for the punishment of all offenses connected with the mint or coinage of the United States, shall be, and they are hereby, declared to be in full force in relation to the assay offices by this act established, as far as the same may be applicable thereto. Laws of the mint applied to assay offices.

SEC. 64. *And be it further enacted*, That if any person or persons shall falsely make, forge, or counterfeit, or cause or procure to be falsely made, forged, or counterfeited, or willingly aid or assist in falsely making, forging, or counterfeiting, any coins, bars, ingots, or disks, in resemblance or similitude of the gold or silver coins, bars, ingots, or disks which have been, or hereafter may be, coined or stamped at the mints and assay offices of the United States; or in resemblance or similitude of any foreign gold or silver coin which by law is, or hereafter may be, made current in the United States, or are in actual use and circulation as money within the United States; or shall pass, utter, publish, or sell, or attempt to pass, utter, publish, or sell, or bring into the United States, from any foreign place, or have in his possession any such false, forged, or counterfeited coins, bars, ingots, or disks, knowing the same to be false, forged, or counterfeited, every person so offending shall be deemed guilty of felony, and shall, on conviction thereof, be punished by fine, not exceeding five thousand dollars, and by imprisonment and confinement at hard labor, not exceeding ten years, according to the aggravation of the offense. Penalty for making or issuing counterfeit gold or silver coin.

SEC. 65. *And be it further enacted*, That if any person or persons shall falsely make, forge, or counterfeit, or cause or procure to be falsely made, forged, or counterfeited, or willingly aid or assist in falsely making, forging, or counterfeiting, any coin in the resemblance or similitude of any of the minor coinage which has been, or hereafter may be coined at the mints of the United States; or shall pass, utter, publish, or sell, or bring into the United States from any foreign place, or have in his possession, any such false, forged, or counterfeited coin, with intent to defraud any body, politic or corporate, or any person or persons whatsoever, every person so offending shall be deemed guilty of felony, Penalty for counterfeiting minor coinage.

and shall, on conviction thereof, be punished by fine, not exceeding one thousand dollars, and by imprisonment and confinement to hard labor not exceeding three years.

Penalty for defacing or falsifying gold or silver coins of the Mint, or foreign coins.

SEC. 66. *And be it further enacted*, That if any person shall fraudulently and for gain's sake, by any art, way, or means whatsoever, deface, mutilate, impair, diminish, falsify, scale, or lighten the gold or silver coins which have been, or which shall hereafter be, coined at the mints of the United States, or any foreign gold or silver coins, which are by law made current, or are in actual use and circulation as money within the United States, every person so offending shall be deemed guilty of a high misdemeanor, and shall be imprisoned not exceeding two years, and fined not exceeding two thousand dollars.

Penalty for debasing gold or silver coins, or for altering the weights used at the mint.

SEC. 67. *And be it further enacted*, That if any of the gold or silver coins which shall be struck or coined at any of the mints of the United States shall be debased, or made worse as to the proportion of fine gold or fine silver therein contained; or shall be of less weight or value than the same ought to be, pursuant to the several acts relative thereto; or if any of the weights used at any of the mints or assay offices of the United States shall be defaced, increased, or diminished through the default or connivance of any of the officers or persons who shall be employed at the said mints, with a fraudulent intent; and if any of the said officers or persons shall embezzle any of the metals which shall at any time be committed to their charge for the purpose of being coined, or any of the coins which shall be struck or coined at the said mints, or any metals, coins, or other moneys of the said mints or assay offices at any time committed to their charge, or of which they may have assumed the charge, every such officer or person who shall commit any or either of the said offenses shall be deemed guilty of felony, and shall be imprisoned at hard labor for a term not less than one year nor more than ten years, and shall be fined in a sum not exceeding ten thousand dollars.

Act to take effect after two months. Retention of present officers, except treasurers of the Mint.

SEC. 68. *And be it further enacted*, That this act shall take effect in two months from the date of its passage; at the expiration of which time the offices of the treasurer of the Mint in Philadelphia, San Francisco, and New Orleans shall be vacated, and the assistant treasurer at New York shall cease to perform the duties of treasurer of the assay office. The other officers and employes of the mints and assay offices now appointed shall continue to hold their respective offices, they having first given the necessary bonds, until further appointments may be required; the Director of the Mint at Philadelphia being styled and acting as superintendent thereof. The duties of the treasurers shall devolve, as herein provided, upon the superintendents, and said treasurers shall act only as assistant treasurers of the United States: *Provided*, That the salaries heretofore paid to the treasurers of the Mint at Philadelphia, San Francisco, and New Orleans, acting as assistant treasurers, shall hereafter be paid to them as "assistant treasurers of the United States;" and that the salary of the assistant treasurer at New York shall not be diminished by the vacation of his office as treasurer of the assay office.

Name and location of mints and assay offices.

SEC. 69. *And be it further enacted*, That the mints and assay offices authorized by this act shall be known as the Mint of the United States at Philadelphia, the mint of the United States at San Francisco, the mint of the United States at Carson; the United States assay office at New York, the United States assay office at Denver, and the United States assay office at Boise City, Idaho; and all unexpended appropriations heretofore authorized by law for the use of the Mint of the United States at Philadelphia, the branch mint of the United States in California, the branch mint of the United States at Denver, the United States assay office in New York, and the United States assay office at Boise City, Idaho, are hereby authorized to be transferred for the account and use of the institutions established and located respectively at the places designated by this act.

Authority for sale of real estate, buildings, and machinery of branch mints at New Orleans, Charlotte, and Dahlonega.

SEC. 70. *And be it further enacted*, That the Secretary of the Treasury be, and is hereby, authorized at his discretion to remove the whole or any part of the machinery, apparatus, and fixtures of the branch mints of the United States at New Orleans, Charlotte, and Dahlonega to any other institution authorized by this act, or at his discretion to sell at public sale, all the real estate, buildings, machinery, apparatus, and fixtures belonging thereto.

Short title—repealing clause.

SEC. 71. *And be it further enacted*, That this act may be cited as the "coinage act, 1870;" and all other acts and parts of acts pertaining to the mints, assay offices, and coinage of the United States are hereby repealed.

APPENDIX B.—TABLE OF WASTAGE.

Statement exhibiting wastages on precious metals operated upon at the United States Mint, at Philadelphia, from 1857 to 1869, inclusive.

Period.	Ounces operated upon.	Wastage.	
		Legal.	Actual.
MELTER AND REFINER'S GOLD.			
From August 16, 1856, to August 16, 1857	447, 715. 557	895. 431	7. 416
From August 16, 1857, to December 31, 1857	1, 131, 919. 508	2, 263. 839	107. 884
From January 1, 1860, to June 30, 1860	695, 761. 501	1, 391. 523	4. 629
From July 1, 1860, to December 31, 1861	7, 178, 270. 075	14, 356. 540	1, 099. 098
For 1862	359, 501. 705	719. 003	697. 341
From January 1, 1863, to February 17, 1864	307, 524. 974	615. 049	337. 743
From February 17, 1864, to March 31, 1865	412, 646. 014	825. 292	23. 044
From March 31, 1865, to May 12, 1868	2, 598, 642. 198	5, 197. 284	577. 947
From May 13, 1868, to March 31, 1869	228, 062. 112	456. 124	5. 973
Total	13, 360, 043. 644	26, 720. 085	2, 861. 075
MELTER AND REFINER'S SILVER.			
From January 1, 1857, to August 15, 1857	4, 251, 159. 45	8, 502. 32	1, 481. 55
From August 15, 1857, to December 31, 1859	10, 348, 546. 38	20, 697. 09	11, 019. 18
From January 1, 1860, to December 31, 1861	2, 482, 195. 01	4, 964. 39	281. 09
For 1862	4, 899, 230. 16	9, 798. 46	5, 488. 33
From February 17, 1864, (including 1863)	850, 670. 04	1, 701. 34	1, 426. 75
From February 17, 1864, to March 31, 1865	510, 626. 37	1, 021. 25	23. 29
From April 1, 1865, to May 21, 1866	387, 302. 41	744. 60	39. 64
From May 21, 1866, to May 12, 1868	1, 729, 114. 32	3, 458. 23	219. 73
From May 13, 1868, to March 31, 1869	691, 680. 51	1, 383. 36	704. 80
Total	26, 150, 524. 65	52, 301. 04	20, 684. 36
CHIEF COINER'S GOLD.			
1857	1, 062, 454. 480	1, 593. 681	145. 656
1858	387, 473. 600	581. 210	4. 560
1859	141, 578. 100	212. 367	8. 886
1860	5, 101, 224. 481	7, 651. 836	36. 235
June 30, 1861	2, 759, 800. 580	4, 139. 700	135. 522
December 31, 1861	350, 026. 210	525. 039	34. 160
1862	282, 638. 700	423. 958	7. 515
1863	403, 146. 150	604. 719	5. 844
1865	692, 543. 850	1, 038. 815	12. 853
1866 to September 30	931, 070. 100	1, 396. 605	59. 525
From September 30, 1866, to March 31, 1868	1, 114, 398. 150	1, 691. 597	50. 081
From March 31, 1868, to March 31, 1869	240, 894. 000	361. 331	11. 439
Total	13, 708, 142. 401	20, 562. 189	523. 715
CHIEF COINER'S SILVER.			
1857	6, 412, 248. 70	12, 824. 49	2, 973. 21
1858	6, 869, 825. 60	13, 739. 65	1, 613. 41
1859	1, 565, 672. 90	3, 131. 34	140. 32
1860	1, 023, 691. 60	2, 047. 38	165. 74
June 30, 1861	2, 039, 376. 84	4, 078. 75	505. 44
December 31, 1861	2, 669, 676. 28	5, 399. 35	622. 14
1862	830, 384. 05	1, 660. 76	762. 37
1863	478, 438. 40	956. 87	193. 20
1864	363, 283. 70	726. 56	137. 53
1865	467, 454. 75	934. 91	219. 91
1866 to September 30	473, 687. 10	947. 37	295. 68
From September 30, 1866, to March 31, 1868	765, 886. 13	1, 531. 37	151. 25
From March 31, 1868, to March 31, 1869	739, 094. 60	1, 478. 18	191. 82
Total	25, 437, 815. 25	40, 875. 56	8, 163. 84

The amount of bullion operated upon at the branch mint at San Francisco and at the assay office in New York is much greater, and the average wastage per ounce considerably less, than at Philadelphia.

APPENDIX C.—TABLES OF UNITED STATES

TABLE I.—

Table showing the standard weights, expressed both in troy and metric units, of the several law; together with the standard proportions of fine metal and alloy of each description of both of single pieces and of large numbers when delivered together, and the tolerance as to payment of debt.

Denomination of coins.	Fineness in thousandths.		Number of pieces that may be coined from 100 grams of standard metal.	Standard weight of pure metal.		Standard weight of coin.		Tolerance		
	Pure metal.	Alloy.		Troy weight.	Metric weight.	Troy weight.	Metric weight.	In fine- ness.	In the weight pieces.	
				Grains.	Grams.	Grains.	Grams.	Thousandths.	Troy grains.	Milligrams.*
GOLD.										
Double eagle	900	100	2.991—	464.4	30.0926+	516	33.4363—	2	1	32.40—
Eagle	900	100	5.982—	232.2	15.0463+	258	16.7181+	2	2	32.40—
Half eagle	900	100	11.963+	116.1	7.5232—	129	8.3591—	2	2	32.40—
Three-dollar piece.	900	100	19.938+	69.66	4.5139—	77.4	5.0154+	2	2	16.20—
Quarter eagle	900	100	23.926+	58.05	3.7616—	64.5	4.1795+	2	2	16.20—
One-dollar piece..	900	100	59.815+	23.22	1.5046+	25.8	1.6718+	2	2	16.20—
SILVER.										
Dollar	900	100	3.741+	371.25	24.0566+	412.5	26.7296—	3	1½	97.20—
Half dollar	900	100	8.038—	172.8	11.1973—	199	12.4414—	3	1½	97.20—
Quarter dollar....	900	100	16.075+	86.4	5.5986+	96	6.2207—	3	1	64.80—
Dime	900	100	40.188+	34.56	2.2395—	38.4	2.4883—	3	1	32.40—
Half dime	900	100	80.377—	17.28	1.1197+	19.2	1.2441+	3	1	32.40—
Three-cent piece..	900	100	133.961+	10.368	0.6718+	11.52	0.7465—	....	1	32.40—
NICKEL.										
Five-cent piece†..	.....	.....	20.000	.....	.....	77.16	5.000—	.....	2	129.60
Three-cent piece†.	.....	.....	51.441+	.....	.....	30	1.9440—	.....	4	259.20
BRONZE.										
Two-cent piece†..	.....	.....	16.075+	.....	.....	96	6.2207—	.....	4	259.20
One-cent piece†..	.....	.....	32.151—	.....	.....	48	3.1103+	.....	4	259.20

* 1,000 milligrams make one gram; 1 gram equals 15.4323488 troy
† Nickel and copper: one-fourth copper, three-fourths nickel.

COINAGE EXISTING AND PROPOSED.

EXISTING COINAGE.

coins, (gold, silver, nickel, and bronze,) of the United States, now issued under authority of coin; also, the tolerance—or rate of deviation from the standard allowed by law—in the weight, fineness; also, the extent to which the several descriptions of coins are made legal tender in

of the mint, or deviation allowed—									
Equivalent value of the amount of deviation allowed in 1,000 dollars worth of coins taken singly.	of single		In the weight of a large number of coins taken together.						
	Quantity deliver'd.		Deviation.						
	Number of pieces.	Value.	Troy pennyweights.		Equivalent number of—		Value.	Equivalent value of the amount of deviation allowed in 1,000 dollars' worth of coins taken together.	Ratio of the weight of standard silver coin to that of standard gold coin of like denomination.
			Troy grains.	Grams.					
<i>Cents.</i>						<i>Cents.</i>	<i>Cents.</i>		
96 9-10	1, 000	\$20, 000	3	72	4. 655+	279. 1+	14. 0—	.....	In all amounts.
193 8-10	1, 000	10, 000	2	48	3. 110+	186. 1—	18. 6+	.....	Do.
387 6-10	1, 000	5, 000	1½	36	2. 333—	139. 5+	27. 9+	.....	Do.
323	1, 000	3, 000	1	24	1. 555+	93. 0+	31. 0+	.....	Do.
387 6-10	1, 000	2, 500	1	24	1. 555+	93. 0+	37. 2+	.....	Do.
969	1, 000	1, 000	½	12	0. 778—	46. 5+	46. 5+	.....	Do.
363 7-11	1, 000	1, 000	4	96	6. 221—	33 3-11	23 3-11	16. 0—	Do.
781 1-4	1, 000	500	3	72	4. 665+	18½	37½	14. 8+	Not exceeding \$5.
1041 2-3	1, 000	250	2	48	3. 110+	12½	50	14. 8+	Do.
1302 1-12	1, 000	100	1	24	1. 555+	6½	62½	14. 8+	Do.
2604 1-6	1, 000	50	1	24	1. 555+	6½	125	14. 8+	Do.
4340 1-4	1, 000	30	1	24	1. 555+	6½	208½	14. 8+	
.....									Not exceeding \$1.
.....									Not exceeding 60 cents.
.....									Not exceeding 4 cents.
.....									Do.

grains; 1 troy grain equals 64.79895 milligrams.

‡ Tin and zinc, five per cent.; copper, ninety-five per cent.

TABLE II.—PROPOSED COINAGE, ACCORD

Denomination of coins.	Fineness in thousandths.		Number of pieces that may be coined from 100 grams of standard metal.	Standard weight of pure metal.		Standard weight of coin.		Tolerance		
	Pure metal.	Alloy.		Troy weight.	Metric weight.	Troy weight.	Metric weight.	In fineness.	In the weight pieces.	
				Grains.	Grams.	Grains.	Grams.		Thousandths.	Troy grains.	Milligrams.
GOLD.										
Double eagle	900	100	2.991—	464.4	30.0926+	516	33.4363—	1	$\frac{1}{2}$	32.40—
Eagle	900	100	5.982—	232.2	15.0463+	258	16.7181+	1	$\frac{1}{2}$	24.30—
Half eagle	900	100	11.963+	116.1	7.5232—	129	8.3591—	1	$\frac{1}{2}$	16.20—
Three-dollar piece.	900	100	19.938+	69.66	4.5139—	77.4	5.0154+	1	1.6	10.80—
Quarter eagles....	900	100	23.926+	58.05	3.7616—	64.5	4.1795+	1	1.6	10.80—
One-dollar piece ..	900	100	59.815+	23.22	1.5046+	25.8	1.6718+	1	1-12	5.40—
SILVER.										
Half dollar	900	100	8.038—	172.8	11.1973—	192	12.4414—	2½	1	64.80—
Quarter dollar....	900	100	16.075+	86.4	5.5986+	96	6.2207—	2½	1	64.80—
Dime	900	100	40.188+	34.56	2.2395—	38.4	2.4883—	2½	$\frac{1}{2}$	32.40—
NICKEL.										
Five-cent piece*.....	.....	.....	20	.....	.....	77.16+	5	†	3	194.40
Three-cent piece*.....	.....	.....	33 1-3	.....	.....	46.30—	3	†	2	129.60
One-cent piece*.....	.....	.....	66½	.....	.....	23.15—	1½	†	2	129.60

* Nickel and copper: nickel, one-fourth; copper, three-fourths.

REMARKS.—The proposed bill introduces no change in the standards, either as to the weight or fineness the tolerance in weight and fineness, and reduces the limit within which the coins of silver and nickel

Continued.

ING TO THE ACCOMPANYING BILL.

[illegible]

†25 in the proportion of nickel.

of the gold and fractional silver coins of the United States; but proposes certain modifications as to
are legal tender.

TABLE III.—METRIC SYSTEM

[The standard weight and the tolerance as to weight are expressed in this table in

Denomination of coins.	Fineness in thousandths.		Number of pieces that may be coined from 100 grams of standard metal.	Standard weight of pure metal, metric weight, grams.	Standard weight of coin, metric weight, grams.	Tolerance of the		
	Pure metal.	Alloy.				In fineness.	In the weight of single pieces.	
						Thousandths.	Milligrams.	Equivalent value of the amount of deviation allowed in 1,000 dollars' worth of coins taken singly.
GOLD.								
Double eagle*	900	100	3	30	33 $\frac{1}{2}$	1	33 $\frac{1}{2}$	<i>Cents.</i> 100
Eagle	900	100	6	15	16 $\frac{2}{3}$	1	25	150
Half eagle	900	100	12	7.5	8 $\frac{1}{3}$	1	15	180
Three-dollar piece	900	100	20	4.5	5	1	12	240
Quarter eagle	900	100	24	3.75	4 1-6	1	10	240
One-dollar piece	900	100	60	1.5	1 $\frac{1}{2}$	1	5	300
SILVER.								
Half dollar	900	100	8	11.25	12.5	2 $\frac{1}{2}$	62 $\frac{1}{2}$	500
Quarter dollar	900	100	16	5.625	6.25	2 $\frac{1}{2}$	62 $\frac{1}{2}$	1,000
Dime	900	100	40	2.25	2.5	2 $\frac{1}{2}$	50	2,000
NICKEL.								
Five-cent piece†			20		5	} 25 (as to nickel.)	200	
Three-cent piece†			33 $\frac{1}{3}$		3		150	
One-cent piece†			66 $\frac{2}{3}$		1.5		100	

* The double eagle here proposed is the exact equivalent, both as to weight and fineness, of the Ger yet issued by any country. It is smaller than the standard double eagle now authorized by about specified are in proportion. Two of the *silver* half-dollar pieces here described constitute in weight are of proportionate weight and fineness.

† Nickel and copper: nickel, one-fourth; copper, three-fourths.

Continued.

OF COINAGE—SUGGESTED.

terms of the *gram*, the metric unit of weight: 1 gram=15.3423488 troy grains.]

mint, or deviation allowed.					Ratio of the weight of standard silver coin to that of standard gold coin of like denomination.	To what extent a legal tender.
In the weight of a large number of pieces taken together.						
Quantity delivered.		Deviation allowed.				
Number of pieces.	Value.	Grams.	Value.	Equivalent value of the amount of deviation allowed in 1,000 dollars' worth of coins taken together.		
			<i>Cents.</i>	<i>Cents.</i>		
250	\$5,000	1	20	4	.....	In all amounts.
500	5,000	1	20	4	.....	In all amounts.
1,000	5,000	1	20	4	.....	In all amounts.
1,000	3,000	1	15	5	.....	In all amounts.
2,000	5,000	1	20	4	.....	In all amounts.
1,000	1,000	1-6	10	10	.....	In all amounts.
2,000	1,000	1-3	2½	2½	15 to 1	Not to exceed \$1 in any one payment.
4,000	1,000	1-3	2½	2½	15 to 1	Not to exceed \$1 in any one payment.
1,000	100	1-3	1	10	15 to 1	Not to exceed \$1 in any one payment.
.....	.....	.....	.....	.....	.....	Not to exceed 20 cts. in any one payment.
.....	.....	.....	.....	.....	.....	Not to exceed 20 cts. in any one payment.
.....	.....	.....	.....	.....	.....	Not to exceed 20 cts. in any one payment.

man Union crown, the only *gold* coin having exact and simple relations to the metric unit of weight three-tenths of one per cent., (more exactly by 3.088—parts in ¹one thousand.) The other gold coins and fineness an exact equivalent to the silver five-franc piece of France; and the other silver coins

Appendix C.—

TABLE IV.—COMPARISON OF

Comparison of the existing coinage, the coinage proposed in the bill, and

Denomination of coins.	Tolerance of the mint, or amount of deviation allowed—								
	In the weight of single pieces.						In the weight of		
	Value per 1,000 pieces.			Value per 1,000 dollars' worth.			Value per 1,000 pieces.		
	Existing law.	Proposed bill.	Metric proposition.	Existing law.	Proposed bill.	Metric proposition.	Existing law.	Proposed bill.	Metric proposition.
GOLD.									
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Double eagle.....	1938—	1938—	2000	96 9-10	96 9-10	100	279 1 4	74 4-10	80
Eagle.....	1938—	1453+	1500	193 8-10	145 3-10	150	186 0	37 2-10	40
Half eagle.....	1938—	969—	900	387 6-10	193 8-10	180	139 5	18 6-10	20
Three-dollar piece.....	969—	646—	720	323	215 1-3	240	93 0	13 95-100	15
Quarter eagle.....	969—	646—	600	387 6-10	258 4-10	240	93 0	9 3-10	10
One-dollar piece.....	969—	323—	300	969	323 —	300	46 5	9 3-10	10
SILVER.									
Dollar*	363 7-11			363 7-11			23 3-11		
Half dollar.....	390 5-8	260 5-12	250	781 1-4	520 5-6	500	18 1	1 1	1 1
Quarter dollar.....	260 2-5	260 5-12	250	1041 2-3	1041 2-3	1000	12 1		
Dime.....	130 1-5	130 2-10	200	1302 1-12	1302 1-12	2000	6 1	1 1	1 1
Half dime*	130 1-5			2604 1-6			6 1		
Three-cent piece*	130 1-5			4340 1-4			6 1		
NICKEL.									
Five-cent piece.....									
Three-cent piece.....									
One-cent piece†.....									
BRONZE.									
Two-cent piece.....									
One-cent piece.....									

* Dollar, half dime, and three-cent piece (silver) and the two and
† Proposed new coin.

Continued.

COINAGE, EXISTING AND PROPOSED.

the suggested metric coinage as to standard weight and tolerance in weight.

Weight of coins.

large amounts.			Weight of pure metal.			Weight of standard metal.			Number of pieces that may be coined from 100 grams of standard metal.		
Value per 1,000 dollars' worth.											
Existing law.	Proposed bill.	Metric position.	Existing law.	Proposed bill.	Metric position.	Existing law.	Proposed bill.	Metric position.	Existing law.	Proposed bill.	Metric position.
<i>Cents.</i>	<i>Cents.</i>	<i>Cts.</i>	<i>Grams.</i>	<i>Grams.</i>	<i>Grams.</i>	<i>Grams.</i>	<i>Grams.</i>	<i>Grams.</i>	<i>Pieces.</i>	<i>Pieces.</i>	<i>Pieces.</i>
14.0 —	3 72-100	4	30.0926 +	30.0926 +	30	33.4363 —	33.4363 —	33½	2.991 —	2.991 —	3
18.6 +	3 72-100	4	15.0463 +	15.0463 +	15	16.7181 +	16.7181 +	16½	5.982 —	5.982 —	6
27.9 +	3 72-100	4	7.5232 —	7.5232 —	7.5	8.3591 —	8.3591 —	8½	11.963 +	11.963 +	12
31.0 +	4 65-100	5	4.5139 —	4.5139 —	4.5	5.0154 +	5.0154 +	5	19.938 +	19.938 +	20
37.2 +	3 72-100	4	3.7616 —	3.7616 —	3.75	4.1795 +	4.1795 +	4 1-6	23.926 +	23.926 +	24
46.5 +	9 30-100	10	1.5046 +	1.5046 +	1.5	1.6718 +	1.6718 +	1½	59.815 +	59.815 +	60
23 3-11			24.0566			26.7296 —			3.741		
37½	2½	2½	11.1973 —	11.1973 —	11.25	12.4414 —	12.4414 —	12.5	8.038 —	8.038 —	8
50	2½	2½	5.5986 —	5.5986 —	5.625	6.2207 —	6.2207 —	6.25	16.075	16.075	16
62½	12½	10	2.2395 —	2.2395 —	2.25	2.4883 —	2.4883 —	2.5	40.188 +	40.188 +	40
125			1.1197 +			1.2441 +			80.377		
200			0.6718			0.7465 —			133.961		
						5.000	5	5	20.	20	20
						1.944 —	3	3	51.441 +	33½	33½
							1½	1.5	66½	66½	66½
						6.9207 —					
						3.1103					

one cent pieces, bronze, omitted in the proposed bill.

APPENDIX D.—ENGLISH COINAGE ACT, APRIL 4, 1870.

[33 VICT.—CHAP. 10.]

AN ACT to consolidate and amend the law relating to the coinage and her Majesty's mint. [4th April, 1870.]

Whereas it is expedient to consolidate and amend the law relating to the coinage and her Majesty's mint: Be it enacted by the Queen's most excellent Majesty, by and with the advice and consent of the lords spiritual and temporal, and commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. This act may be cited as "The coinage act, 1870."

2. In this act, the term "treasury" means the lord high treasurer for the time being, or the commissioners of her Majesty's treasury for the time being, or any two of them; the term "the mint" means, except as expressly provided, her Majesty's royal mint in England; the term "British possession" means any colony, plantation, island, territory, or settlement within her Majesty's dominions and not within the United Kingdom; and the term "person" includes a body corporate.

3. All coins made at the mint of the denominations mentioned in the first schedule to this act shall be of the weight and fineness specified in that schedule, and the standard trial plates shall be made accordingly. If any coin of gold, silver, or bronze, but of any other denomination than that of the coins mentioned in the first schedule to this act, is hereafter coined at the mint, such coin shall be of a weight and fineness bearing the same proportion to the weight and fineness specified in that schedule as the denomination of such coin bears to the denominations mentioned in that schedule: *Provided*, That in the making of coins a remedy (or variation from the standard weight and fineness specified in the said first schedule) shall be allowed of an amount not exceeding the amount specified in that schedule.

4. A tender of payment of money, if made in coins which have been issued by the mint in accordance with the provisions of this act, and have not been called in by any proclamation made in pursuance of this act, and have not become diminished in weight, by wear, or otherwise, so as to be of less weight than the current weight, that is to say, than the weight (if any) specified as the least current weight in the first schedule to this act, or less than such weight as may be declared by any proclamation made in pursuance of this act, shall be a legal tender—in the case of gold coins for a payment of any amount; in the case of silver coins for a payment of an amount not exceeding forty shillings, but for no greater amount; in the case of bronze coins for a payment of an amount not exceeding one shilling, but for no greater amount. Nothing in this act shall prevent any paper currency which under any act or otherwise is a legal tender from being a legal tender.

5. No piece of gold, silver, copper, or bronze, or of any metal or mixed metal, of any value whatever, shall be made or issued, except by the mint, as a coin or a token for money, or as purporting that the holder thereof is entitled to demand any value denoted thereon. Every person who acts in contravention of this section shall be liable on summary conviction to a penalty not exceeding twenty pounds.

6. Every contract, sale, payment, bill, note, instrument, and security for money, and every transaction, dealing, matter, and thing whatever relating to money, or involving the payment of, or the liability to pay any money, which is made, executed, or entered into, done or had, shall be made, executed, entered into, done and had according to the coins which are current and legal tender in pursuance of this act, and not otherwise, unless the same be made, executed, entered into, done or had according to the currency of some British possession, or some foreign state.

7. Where any gold coin of the realm is below the current weight as provided by this act, or where any coin is called in by any proclamation, every person shall, by himself or others, cut, break, or deface any such coin tendered to him in payment, and the person tendering the same shall bear the loss. If any coin, cut, broken, or defaced in pursuance of this section is not below the current weight, or has not been called in by any proclamation, the person cutting, breaking, or defacing the same shall receive the same in payment according to its denomination. Any dispute which may arise under this section may be determined by a summary proceeding.

8. Where any person brings to the mint any gold bullion, such bullion shall be assayed and coined, and delivered out to such person, without any charge for such assay or coining, or for waste in coining: *Provided*, That—1, if the fineness of the whole of the bullion so brought to the mint is such that it cannot be brought to the standard fineness under this act of the coin to be coined thereout, without refining some portion of it, the master of the mint may refuse to receive, assay, or coin such bullion; 2, where the bullion so brought to the mint is finer than the standard fineness under this act of the coin to be coined thereout, there shall be delivered to the person bringing the same such additional amount of coin as is proportionate to such superior fineness. No undue preference shall be shown to any person under this section, and every person shall have priority according to the time at which he brought such bullion to the mint.

9. The treasury may from time to time issue to the master of the mint, out of the growing produce of the consolidated fund, such sums as may be necessary to enable him to purchase bullion in order to provide supplies of coin for the public service.

10. All sums received by the master of the mint, or any deputy master or officer of the mint, in payment for coin produced from bullion purchased by him, and all fees and payments received by the master or any deputy master or officer of the mint as such, shall (save as otherwise provided in the case of any branch mint in a British possession by a proclamation respecting such branch mint) be paid into the receipt of the exchequer, and carried to the consolidated fund.

11. It shall be lawful for her Majesty, with the advice of her privy council, from time to time, by proclamation, to do all or any of the following things, namely: 1. To determine the dimension of and design for any coin. 2. To determine the denominations of coins to be coined at the mint. 3. To diminish the amount of remedy allowed by the first schedule to this act in the case of any coin. 4. To determine the weight (not being less than the weight, if any, specified in the first schedule to this act) below which a coin, whether diminished in weight by wear or otherwise, is not to be a current or a legal tender. 5. To call in coins of any date or denomination, or any coins coined before the date in the proclamation mentioned. 6. To direct that any coins, other than gold, silver, or bronze, shall be current and be a legal tender for the payment of any amount not exceeding the amount specified in the proclamation, and not exceeding five shillings. 7. To direct that coins coined in any foreign country shall be current, and be a legal tender, at such rates, up to such amounts, and in such portion of her Majesty's dominions as may be specified in the proclamation; due regard being had in fixing those rates to the weight and fineness of such coins, as compared with the current coins of this realm. 8. To direct the establishment of any branch of the mint in any British possession, and impose a charge for the coinage of gold thereat; determine the application of such charge; and determine the extent to which such branch is to be deemed part of the mint, and to which coins issued therefrom are to be current and be a legal tender, and to be deemed to be issued from the mint. 9. To direct that the whole or any part of this act shall apply to and be in force in any British possession, with or without any modifications contained in the proclamation. 10. To regulate any matters relative to the coinage and the mint within the present prerogative of the Crown which are not provided for by this act. 11. To revoke or alter any proclamation previously made. Every such proclamation shall come into operation on the date therein in that behalf mentioned, and shall have effect as if it were enacted in this act.

12. For the purpose of ascertaining that coins issued from the mint have been coined in accordance with this act, a trial of the pyx shall be held at least once in every year in which coins have been issued from the mint. It shall be lawful for her Majesty, with the advice of her privy council, from time to time, by order, to make regulations respecting the trial of the pyx and all matters incidental thereto, and in particular respecting the following matters, viz: 1. The time and place of the trial. 2. The setting apart out of the coins issued by the mint certain coins for the trial. The summoning of a jury of not less than six out of competent freemen of the mystery of goldsmiths of the city of London or other competent persons. 4. The attendance at the trial of the jury so summoned, and of the proper officers of the treasury, the Board of Trade, and the mint, and the production of the coins so set apart, and of the standard trial plates and standard weights. 5. The proceeding at and conduct of the trial, including the nomination of some person to preside thereat, and the swearing of the jury, and the mode of examining the coins. 6. The recording and the publication of the verdict, and the custody of the record thereof, and the proceedings (if any) to be taken in consequence of such verdict. Every such order shall come into operation on the date therein in that behalf mentioned, and shall have effect as if it were enacted in this act, but may be revoked or altered by any subsequent order under this section.

13. The treasury may from time to time do all or any of the following things: 1. Fix the number and duties of the officers of and persons employed in the mint. 2. Make regulations and give directions (subject to the provisions of this act and any proclamation made thereunder) respecting the general management of the mint, and revoke and alter such regulations and directions.

MASTER AND OFFICERS OF MINT.

14. The chancellor of the exchequer for the time being shall be the master, worker, and warden of her Majesty's royal mint in England, and governor of the mint in Scotland: *Provided*, That nothing in this section shall render the chancellor of the exchequer incapable of being elected to or of sitting or voting in the House of Commons, or vacate the seat of the person who at the passing of this act holds the office of chancellor of the exchequer. All duties, powers, and authorities imposed on or vested in or to be transacted before the master of the mint may be performed and exercised by or transacted before him or his sufficient deputy.

15. The treasury may from time to time appoint deputy masters and other officers and persons for the purpose of carrying on the business of the mint in the United Kingdom or elsewhere, and assign them their duties, and award them their salaries. The master of the mint may from time to time promote, suspend, and remove any such deputy masters, officers, and persons.

STANDARD TRIAL PLATES AND WEIGHTS.

16. The standard trial plates of gold and silver used for determining the justness of the gold and silver coins of the realm issued from the mint, which now exist or may hereafter be made, and all books, documents, and things used in connection therewith or in relation thereto, shall be in the custody of the Board of Trade, and shall be kept in such places and in such manner as the Board of Trade may from time to time direct; and the performance of all duties in relation to such trial plates shall be part of the business of the standard weights and measures department of the Board of Trade. The Board of Trade shall from time to time, when necessary, cause new standard trial plates to be made and duly verified, of such standard fineness as may be in conformity with the provisions of this act.

17. The standard weights for weighing and testing the coin of the realm shall be placed in the custody of the Board of Trade, and be kept in such places and in such manner as the Board of Trade may from time to time direct; and the performance of all duties in relation to such standard weights shall be part of the business of the standard weights and measures department of the Board of Trade. The Board of Trade shall from time to time cause weights of each coin of the realm for the time being, and of multiples of such of those weights as may be required, to be made and duly verified; and those weights, when approved by her Majesty in council, shall be the standard weights for determining the justness of the weight of and for weighing such coin. The master of the mint shall from time to time cause copies to be made of such standard weights, and once at least in every year the Board of Trade and the master of the mint shall cause such copies to be compared and duly verified with the standard weights in the custody of the Board of Trade. All weights which are not less in weight than the weight prescribed by the first schedule to this act for the lightest coin, and are used for weighing coin, shall be compared with the said standard weights, and if found to be just shall, on payment of such fee, not exceeding five shillings, as the Board of Trade from time to time prescribe, be marked by some officer of the standard weights and measures department of the Board of Trade with a mark approved of by the Board of Trade, and notified in the London Gazette; and a weight which is required by this section to be so compared, and is not so marked, shall not be deemed a just weight for determining the weight of gold and silver coin of the realm. If any person forges or counterfeits such mark, or any weight so marked, or willfully increases or diminishes any weight so marked, or knowingly utters, sells, or uses any weight with such counterfeit mark, or any weight so increased or diminished, or knowingly uses any weight declared by this section not to be a just weight, such person shall be liable to a penalty not exceeding fifty pounds. All fees paid under this section shall be paid into the exchequer, and carried to the consolidated fund.

LEGAL PROCEEDINGS.

18. Any summary proceeding under this act may be taken, and any penalty under this act may be recovered in England, before two justices of the peace, in manner directed by the act of the session of the eleventh and twelfth years of the reign of her present Majesty, chapter forty-three, intituled "An act to facilitate the performance of the duties of justices of the peace out of sessions within England and Wales with respect to summary convictions and orders," and any act amending the same. In Scotland, in manner directed by the summary procedure act, 1864. In Ireland, so far as respects Dublin, in manner directed by the acts regulating the powers of justices of the peace or the police of Dublin metropolis, and elsewhere in manner directed by the petty sessions (Ireland) act, 1851, and any act amending the same. In any British possession, in the courts, and before such justices or magistrates, and in the manner in which the like proceedings and penalties may be taken and recovered by the law of such possession, or as near thereto as circumstances admit, or in such other courts, or before such other justices or magistrates, or in such other manner as any act or ordinance having the force of law in such possession may from time to time provide.

MISCELLANEOUS.

19. This act, save as expressly provided by this act, or by any proclamation made thereunder, shall not extend to any British possession.

20. The acts mentioned in the first part of the second schedule to this act are hereby repealed to the extent in the third column of such schedule mentioned, and those

mentioned in the second part of the same schedule are hereby repealed entirely: *Provided*, That—1, this repeal shall not affect anything already done or suffered, or any right already acquired or accrued; 2, all weights for weighing coin which have, before the passing of this act, been marked at the mint or by any proper officer shall be deemed to have been marked under this act; 3, every branch of the mint which, at the passing of this act, issues coins in any British possession shall, until the date fixed by any proclamation made in pursuance of this act with respect to such branch mint, continue in all respects to have the same power of issuing coins and be in the same position as if this act had not passed, and coins so issued shall be deemed for the purpose of this act to have been issued from the mint; 4, the said acts (unless relating to a branch mint and unless in the said schedule expressly otherwise mentioned) are not repealed so far as they apply to any British possession to which this act does not extend until a proclamation directing that this act or any part thereof, with or without any modification contained in the proclamation, shall be in force in such British possession comes into operation.

SCHEDULES.—FIRST SCHEDULE.

Denomination of coin.	Standard weight.		Least current weight.		Standard fineness.	Remedy allowance.		
	Imperial weight.	Metric weight.	Imperial weight.	Metric weight.		Weight per piece		Millesimal fineness.
	Grains.	Grams.	Grains.	Grams.		Imperial grains.	Metric grams.	
GOLD:								
Five pound	616. 37239	39. 94028	612. 50000	39. 68935	Eleven-twelfths fine gold, one-twelfth alloy; or millesimal fineness 916. 66.	1. 00000	0. 06479	} 0. 002
Two pound	246. 54895	15. 97611	245. 00000	15. 87574		0. 40000	0. 02592	
Sovereign	123. 27447	7. 98805	122. 50000	7. 93787		0. 20000	0. 01296	
Half sovereign	61. 63723	3. 99402	61. 12500	3. 96083		0. 10000	0. 00648	
SILVER:								
Crown	436. 36363	28. 27590	Thirty-seven-fortieths fine silver, three-fortieths alloy; or millesimal fineness 925.	1. 81818	0. 11781	} 0. 004
Half crown	218. 18181	14. 13795	.....	.....		0. 90909	0. 05890
Florin	174. 54545	11. 31036	.....	.....		0. 72727	0. 04712
Shilling	87. 27272	5. 65518	.....	.....		0. 36363	0. 02356
Sixpence	43. 63636	2. 82759	.....	.....		0. 18181	0. 01178
Groat or fourpence	29. 09090	1. 88506	.....	.....		0. 12121	0. 00785
Threepence	21. 81818	1. 41379	.....	.....		0. 09090	0. 00589
Twopence	14. 54545	0. 94253	.....	.....		0. 06060	0. 00392
Penny	7. 27272	0. 47126	.....	.....	0. 03030	0. 00196	
BRONZE:								
Penny	145. 83333	9. 44984	Mixed Metal, copper, tin, and zinc.	2. 91666	0. 18899	} None.
Halfpenny	87. 50000	5. 66990	.....	.....		1. 75000	0. 11339
Farthing	43. 75000	2. 83495	.....	.....		0. 87500	0. 05669

The weight and fineness of the coins specified in this schedule are according to what is provided by the act 56 George the Third, chapter sixty-eight, that the gold coin of the United Kingdom of Great Britain and Ireland should hold such weight and fineness as were prescribed in the then existing mint indenture, that is to say, that there should be nine hundred and thirty-four sovereigns and one ten shilling piece contained in twenty pounds weight troy of standard gold, of the fineness at the trial of the same of twenty-two carats fine gold and two carats of alloy in the pound weight troy; and further, as regards silver coin, that there should be sixty-six shillings in every pound troy of standard silver of the fineness of eleven ounces two pennyweights of fine silver, and eighteen pennyweights of alloy in every pound weight troy.

SECOND SCHEDULE.

First Part—Acts partly repealed.

For regulating and ascertaining the fineness of silver work. (2 Hen. 6, c. 17.)* So much as relates to the master of the mint.

An act to amend the acts relating to the standard weights and measures, and to the standard trial pieces of the coin of the realm. (29 and 30 Vict., c. 82.) Section thirteen.

* C. 14, in Ruffhead.

Second Part.—Acts wholly repealed

An act for encouraging of coinage. (18 and 19 Cha. 2, c. 5.)*

An act for ascertaining the rates of foreign coins in her Majesty's plantations in America. (6 Anne, c. 57.†)

An act to explain and amend an act made in the fourth year of his present Majesty, intituled "An act to prevent paper bills of credit hereafter to be issued in any of his Majesty's colonies or plantations in America from being declared to be a legal tender in payments of money, and to prevent the legal tender of such bills as are now subsisting from being prolonged beyond the periods limited for calling in and sinking the same." († 13 Geo. 3, c. 57.)

An act for applying a certain sum of money for calling in and recoining the deficient gold coin of this realm; and for regulating the manner of receiving the same at the Bank of England, and of taking there an account of the deficiency of the said coin and making satisfaction for the same; and for authorizing all persons to cut and deface all gold coin that shall not be allowed to be current by his Majesty's proclamation. (14 Geo. 3, c. 70.)

An act for regulating and ascertaining the weights to be made use of in weighing the gold and silver coin of this kingdom. (14 Geo. 3, c. 92.)

An act for allowing the officer appointed to mark or stamp the weights to be made use of in weighing the gold and silver coin of this kingdom, in pursuance of an act made in the last session of Parliament, to take certain fees in the execution of his office. (15 Geo. 3, c. 30.)

An act to ascertain the salary of the master and worker of his Majesty's mint. (39 Geo. 3, c. 94.)

An act for the further prevention of the counterfeiting of silver tokens issued by the governor and company of the Bank of England called dollars, and of silver pieces issued and circulated by the said governor and company called tokens, and for the further prevention of frauds practiced by the imitation of the notes or bills of the said governor and company. (52 Geo. 3, c. 138.)

An act to prevent the issuing and circulating of pieces of gold and silver or other metal, usually called tokens, except such as are issued by the Banks of England and Ireland respectively. (52 Geo. 3, c. 157.)

An act to continue until six weeks after the commencement of the next session of Parliament an act passed in the last session of Parliament, intituled "An act to continue and amend an act of the present session, to prevent the issuing and circulating of pieces of gold and silver or other metal, usually called tokens, except such as are issued by the Banks of England and Ireland respectively." (54 Geo. 3, c. 4.)

An act to provide for a new silver coinage, and to regulate the currency of the gold and silver coin of this realm. (56 Geo. 3, c. 68.)

An act to prevent the issuing and circulating of pieces of copper or other metal usually called tokens. (57 Geo. 3, c. 46.)

An act to regulate certain offices, and abolish others in his Majesty's mints in England and Scotland respectively. (57 Geo. 3, c. 67.)

An act to prevent the further circulation of dollars and tokens issued by the governor and company of the Bank of England for the convenience of the public. (57 Geo. 3, c. 113.)

An act to provide for the assimilation of the currency and moneys of account throughout the United Kingdom of Great Britain and Ireland. (6 Geo. 4, c. 79.)

An act to prevent the further circulation of tokens issued by the governor and company of the Bank of Ireland for the convenience of the public, and for defraying the expense of exchanging such tokens. (6 Geo. 4, c. 98.)

An act to reduce the salary of the master and worker of his Majesty's mint. (1 and 2 Will. 4, c. 10.)

An act to amend several acts relating to the Royal Mint. (7 Will. 4, and 1 Vict. c. 9.)

An act to extend an act of the fifty-sixth year of King George the Third, for providing for a new silver coinage, and for regulating the currency of the gold and silver coin of this realm. (12 and 13 Vict., c. 41.)

An act to extend the enactments relating to the copper coin to coin of mixed metal. (22 and 23 Vict., c. 30.)

An act to enable her Majesty to declare gold coins to be issued from her Majesty's branch mint at Sidney, New South Wales, a legal tender for payments, and for other purposes relating thereto. (26 and 27 Vict., c. 74.)

An act to enable her Majesty to declare gold coins to be issued from her Majesty's colonial branch mints a legal tender for payments, and for other purposes relating thereto. (29 and 30 Vict., c. 65.)

* 18 Cha. 2, in Ruff head.

† C. 30, in Ruffhead.

‡ Repealed as to the whole of her Majesty's dominions upon the passing of this act.